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Intermountain
Region

Humboldt-Toiyabe
National Forest

Ely Ranger District

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RECORD OF DECISION

Ely Westside Rangeland Project

Lincoln, Nye, and White Pine Counties, Nevada



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Record of Decision
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I. Project Area

The Ely Westside Rangeland Project area is located on the Ely Ranger District of the Humboldt-Toiyabe National Forest. The project area comprises about 569,900 acres of the district in the White Pine Range, which is located about 35 miles west of Ely, Nevada, and the Grant-Quinn Range, which is located about 75 miles southwest of Ely, Nevada.

II. Decision

This Record of Decision (ROD) for the Ely Westside Rangeland Project (project) documents my decision to reauthorize grazing permits on nine of the 12 allotments analyzed in the 2011 Final Environmental Impact Statement (2011 FEIS) and the 2014 Final Supplement to the 2011 FEIS (2014 Final Supplement). As the Responsible Official for the Humboldt-Toiyabe National Forest, I have decided to implement Alternative 1 (Proposed Action) [hereinafter Selected Action] from the 2014 Final Supplement, with several modifications.

The Selected Action does the following:

- Reauthorizes grazing on 9 allotments in the project area (Blackrock, Currant Creek, Ellison Basin, Illipah, Pine Creek/Quinn Canyon, Tom Plain, Treasure Hill, and a portion of the Troy Mountain).
- Provides a system of monitoring to determine the ecological condition of the allotments.
- Provides proper use criteria (end-of-season utilization and streambank alteration) and within-season triggers to determine when livestock must be removed.
- Defines a basis for adapting proper use criteria over time in response to changes in the ecological conditions of the allotments.
- Identifies design features to provide additional protection for sensitive resources.
- Requires Allotment Management Plans to be updated to include key components of this decision.
- Modifies Alternative 1 (Proposed Action) by including a non-significant amendment to the Humboldt National Forest Land and Resource Management Plan (Forest Plan) to open the portion of the Troy Mountain Allotment that is not located within the Grant Range Wilderness.



- Modifies Alternative 1 (Proposed Action) by limiting domestic sheep grazing in the Cherry Creek Allotment to within 1 mile of the eastern boundary of the Cherry Creek Allotment.

The Selected Action does not authorize grazing on the Big Creek, Hooper Canyon, and Irwin Canyon allotments or on the portion of the Troy Mountain Allotment that is within the Grant Range Wilderness. These allotments will remain vacant.

Attachment 1 of this ROD provides a copy of the Selected Action (Alternative 1 - Proposed Action) from the 2014 Final Supplement. This attachment includes the proper use criteria that this decision applies to the various vegetative habitat groups in the allotments based on the current ecological condition (attachment 1, table 7). The derivation of these criteria is described in greater detail below in this ROD and in the 2014 Final Supplement.

As discussed extensively in the 2014 Final Supplement, the Selected Action provides specific proper use criteria for allotments based on current ecological condition, and requires periodic monitoring to reassess condition. This two-tiered process first involves an assessment of ecological condition (functioning, functioning at risk, or non-functioning) for each vegetation habitat group (e.g. Wyoming big sagebrush, mountain big sagebrush, aspen, etc.) in an allotment. Second, based upon the assigned condition class, proper use criteria are assigned for the vegetation habitat groups within the allotment. These criteria define the maximum forage consumption and streambank alteration for livestock on an annual basis.

Proper use criteria for herbaceous forage under the Selected Action are generally lower than criteria under Alternative 2 (Current Management). The 2014 Final Supplement contains discussions on the derivation of the proper use criteria used in the Selected Action. As discussed in the 2014 Final Supplement, the scientific literature seems to converge on a finding that moderate forage use in the range of 40 to 50 percent by weight on desirable plant species is sustainable on sites in good condition (functioning) and with similar growing conditions as the Ely Westside Rangeland project area. See the Overview of Impacts of Livestock Grazing on Vegetation in section 3.4.4. in the 2014 Final Supplement. There is less information on appropriate proper use criteria for sites in poorer conditions (functioning-at-risk or non-functioning). As reviewed in the 2014 Final Supplement, light grazing is considered to be forage use in the 30 to 40 percent range, depending on the vegetation habitat group. The Selected Action reduces forage use to specific values in this range for sites that are functioning-at-risk. For non-functioning areas, we have further reduced grazing levels to values in the range of 20 to 30 percent, depending on the vegetation habitat group. The level of reduction in proper use criteria for areas that are functioning-at-risk or non-functioning is based on scientific literature that suggests that sites with lesser ecological functionality will benefit from less grazing pressure and that the reduction must be sufficient to be reliably measured on an annual basis. See section 2.2.1.3.1. Utilization at the End of the Growing Season in the 2014 Final Supplement.

The Selected Action includes several modifications to Alternative 1 (Proposed Action) from the 2014 Final Supplement. With regard to the Troy Mountain Allotment, it is my decision to re-open only the portion of the allotment that is not located within the Grant Range Wilderness. As Appendix I to the 2014 Final Supplement indicates, permitted livestock grazing on this allotment began in 1910 and continued through 1984. The allotment was closed in 1988. The Grant Range Wilderness was designated in 1989. Therefore, livestock grazing was no longer established in this area when the area was designated as wilderness. For this reason, I am not re-opening to livestock grazing the 13,576 acres of the Troy Mountain Allotment that are located in the Grant Range Wilderness. The effects of leaving the Troy Mountain Allotment closed were analyzed under both Alternative 2 (Current Management) and Alternative 3 (No Action/No Grazing). Accordingly, the effects of opening part of the allotment and leaving part of the allotment closed are within the scope of the environmental analysis included in the 2014 Final Supplement and the 2011 FEIS.



Attachment 2 provides a copy of the non-significant Forest Plan amendment that will go into effect as part of my decision. The non-significant Forest Plan amendment opens the portion of the Troy Mountain Allotment that is not located within the Grant Range Wilderness. The non-significant Forest Plan amendment also removes the language referencing the closure from the Grant Range Wilderness Management Area management direction that is included in Amendment 1 to the Forest Plan. My determination that this amendment is not significant is included below in Section IX. Determination That Amendment is Not Significant.

My decision also modifies the grazing that would be allowed on the Cherry Creek Sheep and Goat Allotment under Alternative 1 (Proposed Action). This allotment has a term grazing permit with a variable season. This permit has allowed the permittee to move his domestic sheep (1800 dry ewes) from his BLM allotment in Garden Valley to the home ranch in Cherry Creek sometime between December 1 and February 10, but not to exceed 2 weeks. As the 2014 Final Supplement discloses, desert bighorn sheep use portions of the Cherry Creek Allotment, but timing of use and the physical features present in the allotment serve as natural barriers to contact between desert bighorn sheep and domestic sheep. The Biological Evaluation for this project recommends limiting the authorized area for sheep grazing in the allotment as an additional measure to ensure separation. The recommendation suggested limiting the authorized area for grazing for this permit to within 1 mile of the eastern boundary of the allotment. I am persuaded to adopt this recommendation as part of my decision. This limitation is a reasonable step towards keeping domestic and desert bighorn sheep separated, which helps reduce the risk of disease transfer between the species. Furthermore, this limitation should have little to no impact on the permittee's trailing activities.

The Selected Action also includes a minor modification to the proper use criteria for streambank alteration that were analyzed in the 2011 Draft Environmental Impact Statement (2011 DEIS), the 2011 FEIS, and the 2014 Final Supplement. After considering comments regarding the streambank alteration levels identified in the 2011 DEIS and 2011 FEIS, the Interdisciplinary Team (ID Team) was asked to review the streambank alteration levels that were identified as part of Alternative 1 (Proposed Action) in the 2011 FEIS. The ID Team reviewed the literature on streambank alteration that was cited in the 2011 FEIS and communicated with experts on streambank alteration. Through this effort, the ID Team confirmed that maximum streambank alteration level in the 2011 FEIS for areas that are in functioning condition was too high. The ID Team recommended reducing the maximum streambank alteration level for areas that are in functioning condition from 30 percent to 20 percent, the same level used in the 2011 DEIS. See pages S-1 through S-2 and 32 through 36 of the 2014 Final Supplement for additional information on the adjustments to maximum streambank alteration.

While reviewing the streambank alteration levels, the ID Team also came to the understanding that it was not appropriate to apply the streambank alteration levels to every streambank in the project area. The ID Team recognized that some streambanks are not sensitive to impacts from livestock grazing due to natural armoring and channel types. Based on this recognition, the ID Team recommended only applying the streambank alteration levels to streams that have channel types that are susceptible to disturbance from livestock grazing. The ID Team used the Rosgen (1996) system for categorizing stream channels and concluded that streambank alteration is only an appropriate tool for making livestock management decisions on "E", "F", and "G" channel types and "C" channel types in valley bottoms. See pages S-1 through S-2 and 32 through 36 of the 2014 Final Supplement for additional information on the adjustments to applicability of the maximum streambank alteration levels.

After careful consideration of the ID Team's recommended changes to the streambank alteration proper use criteria, these changes were approved and incorporated into Alternative 1 (Proposed Action) in the 2013 Draft Supplement to the 2011 FEIS (2013 Draft Supplement). The analysis in the 2014 Final Supplement indicates there would be no change in the environmental effects due to the modified streambank alteration levels or the modified applicability of those streambank alteration levels.



The Selected Action also adjusts one of the design features listed in Alternative 1 (Proposed Action) in the 2011 DEIS. We received several comments questioning the validity of the design feature that restricted livestock grazing on sage grouse leks during the lekking season (March 15 through May 15). While preparing the Supplement to the 2011 FEIS, the ID Team reviewed the Interim Conservation Recommendations for Greater Sage-Grouse and Greater Sage-Grouse Habitat. (USDA FS 2012). Based on these conservation recommendations, the design feature that restricted livestock grazing on sage grouse leks during the lekking season was retained with minor adjustments. The adjusted design feature was included in the 2013 Draft Supplement. This adjusted design feature recommends that the Ely Ranger District avoid opening an allotment within 0.5 miles before May 15 or 4.0 miles of a lek before June 30. It is my intent that this design feature will be considered and discussed with permittees during the development of Allotment Management Plans and Annual Operating Instructions. Grazing systems and on dates should be set to avoid grazing within 4.0 miles of an active lek before June 30th whenever possible. This recommendation to avoid grazing in these places during these times should not, however, be interpreted as a prohibition on grazing in these places during these times. The moderate grazing standards that are included as part of this decision provide adequate protection for sage grouse and their habitat. These standards are consistent with the levels being proposed in the Draft Land Use Plan Amendment/Draft Environmental Impact Statement (Draft LUPA/DEIS) that BLM is preparing for Nevada and Northeastern California Sub-Region, a component piece of the BLM and Forest Service National Sage-Grouse Planning Strategy (USDI BLM 2013). The Draft LUPA/DEIS establishes utilization grazing guidelines when sage grouse habitat objectives are not being met that are very similar to the utilization levels that are prescribed as part of this decision. See Table 2.7 of the Draft LUPA/DEIS (USDI BLM 2013).

A full list of the design features that I am including in my decision is included in attachment 1.

III. Rationale for Decision

In selecting a course of action for the Ely Westside Rangeland Project, I have determined that my decision is consistent with all laws, regulations, and agency policy. With the non-significant amendment to the Forest Plan to open the Troy Mountain Allotment, I have determined that my decision is consistent with the overall goals and objectives in the Forest Plan (as amended). I have considered the potential direct, indirect, and cumulative effects and reasonably foreseeable activities. I have also considered the potential unavoidable adverse effects and the potential irreversible and irretrievable commitment of resources in the project area. I believe my decision provides the best balance of management activities to respond to the purpose and need, issues, and public comments, while complying with all applicable laws and regulations. My decision seeks to balance interests of the public at large and the permittees while providing processes to maintain or improve ecological conditions. These interests include managing rangeland vegetation to provide long-term sustainable conditions, while providing livestock grazing opportunities on National Forest System lands in accordance with the Multiple-Use Sustained-Yield Act, the National Forest Management Act, and the Humboldt National Forest Plan. While meeting these interests, the decision provides methods for managing to achieve diverse and healthy ecosystems, meeting threatened and sensitive plant and animal habitat needs, and improving water quality effects to streams, riparian areas, and wetlands.

My criteria for making a decision on this project were based on:

- Achievement of the project's Purpose and Need;
- Relationship to environmental and social issues and public comments received.

Meeting the Purpose and Need

The Purpose and Need statement (described more fully in the 2014 Final Supplement in section 1.3 Purpose and Need for Action) states that the proposed federal action is to authorize grazing in the project area in a way that sustains and improves the health of the land and protects essential ecosystem functions and values. This Purpose and Need is based on two desired conditions expressed in the Forest Plan. One element of the Purpose and Need recognizes the Forest Plan's desired condition of producing 316,620 animal use months (AUMs) on the allotments on the Forest. That element is balanced against the Forest Plan's desired condition to have at least 80 percent of range conditions in satisfactory ecological condition. I believe the Selected Action best meets these dual elements of the Purpose and Need for Action. As discussed below, the Selected Action better meets the resource sustainability objectives provided in the Purpose and Need statement than does Alternative 2 (Current Management). The environmental issues associated with this project are discussed in greater detail in the following section and the three alternatives are compared on these issues. The Selected Action also responds better to the objective of contributing AUM production from allotments on the Humboldt National Forest.

As we note in Section 1.2 Proposed Action of the 2014 Final Supplement, we must address two fundamental questions:

- Is the activity allowed by Congress in the laws that govern the National Forest System?
- What condition must we impose to govern this activity?

In reference to the first question, Congress has allowed livestock grazing as an appropriate use of NFS lands (when in balance with other multiple uses). We have reviewed the permissive direction in the 2014 Final Supplement. Our proposal is consistent with Congressional intent for the use of National Forest System (NFS) lands, as outlined in the Multiple-Use Sustained-Yield Act. Congress also involves itself on a regular basis in our grazing program as, for example, in our annual agency budget appropriation legislation and occasional committee instructions accompanying such legislation. That Congress is aware of the economic ramifications of livestock grazing is evidenced in its active involvement in establishing grazing fees. Congress also provides specific protection for livestock grazing in some legislative actions. For example, the legislation designating the seven wildernesses in the project area (the Nevada Wilderness Protection Act of 1989 and the White Pine County Conservation, Recreation and Development Act of 2006) contain specific language authorizing continued livestock grazing.

I also find significant evidence that Congress expects us to ensure that these programs protect important resources such as clean water, endangered species, wildlife habitat, and cultural resources. Congress may not view livestock grazing as a means to these ends, but grazing must be managed with these outcomes in mind. Because of the complexity of these multiple objectives, Congress has given the Forest Service considerable discretion to implement its direction.

The Forest Plan is a second source of decisions on livestock grazing. The Humboldt National Forest Plan was developed under the provisions of the National Forest Management Act. The Humboldt National Forest Plan clearly envisions livestock grazing and provides goals for this program. As discussed elsewhere in this ROD, the Forest Plan also assigns significant responsibilities to project ID Teams, and to me as the responsible official, to design the proper use criteria under which grazing will occur. The ID Team has done so, to which I concur, and displayed the effects of grazing managed under these conditions. In designing these proper use criteria, a key consideration is the second element of the Purpose and Need: to sustain the health of the lands and protect essential ecosystem functions. The Forest Service process for implementing this proposal is consistent with direction in the National Forest Management Act for developing program guidance and complies with requirements of the National Environmental Policy Act (NEPA) for displaying the environmental impacts of proposed federal actions.



Comparison of Alternatives on Issues

The ID Team reviewed comments received during public scoping during the EIS preparation. They identified four significant issues specific to soil quality; water quality; vegetation condition; and wildlife and fisheries. These issues are described in the 2014 Final Supplement. This section summarizes my key considerations relative to these resource issues and my decision to select a course of action based on Alternative 1 (Proposed Action).

Soil Quality

Monitoring indicates that soil quality is not in functioning condition in any of the allotments in the project area, but could improve under the proper conditions. It is likely that historical grazing in the late 19th and early 20th century significantly altered the soils of the Ely Westside Rangeland Project area and they have yet to recover fully. In samples of wet meadows and dry to moist meadows, virtually every site had at least one soil parameter that was impaired.

Of the issues discussed in this section, I believe soil conditions indicate the strongest need for a change in current management. Maintaining soil function is critical to the long term sustainability of these ecosystems. Some amount of soil compaction and plant trampling is an inevitable outcome of grazing by large animals. The more concentrated the use, the greater the compaction, with subsequent impacts to plant rooting depth and the health of the vegetative community. Soils also have recovery mechanisms, including expansion and contraction during freezing and thawing, wetting and drying, and colonization by microbotic organisms. Based on the 2014 Final Supplement, I believe the Selected Action (Alternative 1 - Proposed Action) will provide a better balance between disturbance and recovery of soils and faster recovery than Alternative 2 (Current Management). Alternative 3 (No Action/No Grazing) would likely provide at least initially faster recovery of soils than either of the two action alternatives. As discussed in Section 3.4.4.4. of the 2014 Final Supplement, whether lands managed under a no grazing prescription would be subject to greater expansion of cheatgrass with subsequent impacts to soils is subject to continued investigation.

Water Quality

With respect to State water quality standards, the project area has shown relatively good water quality. Water sampling has been done on streams that are believed to be representative of the streams in the project area. Most measurements in the project area were in compliance with standards set by the State of Nevada. Sampling of 38 sites also showed temperature readings in 10 samples were above the State of Nevada Class A water standards. Temperature is an indicator of wider and shallower streams and decreased shading, both of which can be the result of livestock use near streams. The sampling also showed some presence of fecal coliform, but with one exception these samples were within state limits. The Selected Action provides greater controls over cattle use in riparian zones than does Alternative 2 (Current Management), and thus it would retain greater amounts of vegetation, which can affect shade for streams, and reduce streambank alteration, which can affect the width and depth of streams. Without an adjustment in management, existing water temperature levels and fecal coliform levels would likely continue under Alternative 2 (Current Management). By eliminating livestock grazing, Alternative 3 (No Action/No Grazing) would further reduce, although not entirely eliminate removal of vegetation by animals and streambank alteration. Natural events would continue to create some disturbance to streams. Wildlife, wild horses, and stray cattle would still continue to impact water temperature and provide a source of fecal coliform.

Vegetation Condition

The impacts of grazing on the vegetative resources of the Ely Westside Rangeland Project Area are discussed extensively in the 2014 Final Supplement, both in the form of a general scientific review, and in a review of the condition of vegetation on each allotment. A key issue is the level of forage use that



desirable plants can tolerate while maintaining health and integrity. It is clear from our review that permitted use (measured at the end of the growing season) must be set at moderate levels for the Ely Westside project area in order to maintain desired conditions and improve undesired conditions over the long term.

Managing grazing to protect rangeland vegetation will continue to be a challenge. It will require close cooperation between the permittee and the Forest Service. My biggest concerns are the seep and springs (meadows) areas that have been identified as functioning-at-risk. Generally, they are experiencing challenges to their vegetative condition. The District staff will be developing livestock grazing strategies for these areas which will be included in the AMP. The Selected Action reduces, but does not completely eliminate grazing in these areas. The Selected Action also provides design criteria to protect riparian areas from management actions that would concentrate livestock.

Alternative 2 (Current Management) has the flexibility to make adjustments like those required and allowed under the Selected Action, but does not require any particular course of action to address problems. Unless adjustments are made, the existing vegetation conditions are likely to continue. Alternative 2 (Current Management) may ultimately result in maintaining or improving vegetation conditions in the project area, but at a slower rate than the Selected Action.

Some will argue that it would be easier to improve conditions by excluding grazing. I understand that vegetation conditions would experience the fastest improvement by completely removing domestic livestock from the project area. However, I believe that Alternative 3 (No Action/No Grazing) is unwarranted. Grazing and management of rangeland vegetation can be successfully integrated. I believe the Selected Action provides this foundation.

Future vegetation management may also be challenged by the impacts of climate change and expansion of non-native species such as cheatgrass. The Selected Action provides a monitoring system to discern desirable and undesirable changes in our systems. It is absolutely critical that we maintain healthy populations of native plants. I believe this further supports the decision to implement the proper use criteria of the Selected Action. As I referenced above and is discussed in the 2014 Final Supplement, some research indicates that light to moderate grazing may in fact build resistance to some invasive species. We will need continued monitoring to track these changes in our systems.

Wildlife and Fisheries

The health of our wildlife and fish populations is closely tied to the availability of healthy and diverse ecosystems. By prescribing grazing to ensure healthy viable plant populations, the Selected Action provides the basis for healthy ecosystems that can be shared with wildlife and aquatic species.

The perspectives provided in the Vegetation subsection above roll into this discussion because wildlife and fish habitat is so intimately connected to vegetative condition. In addition to designing the Selected Action to better accommodate our vegetative ecosystems, the Selected Action also incorporates design features and monitoring criteria specifically directed at wildlife and fish species. Avoiding activities (such as salting, placement of water sources or temporary handling facilities) that concentrate livestock in the vicinity of sage grouse nests or leks, pygmy rabbit burrows, flammulated owl nests, bat roosts, and riparian and aspen vegetation communities offers additional protection. The Selected Action provides a strategy for managing and restoring, where needed, the vegetative systems on these allotments. These adjustments to our grazing management represent a restoration approach that improves conditions for a wide variety of species, including sage grouse and pygmy rabbit.

While adjustments that correspond with the actions required under the Selected Action can be made under Alternative 2 (Current Management), the Selected Action provides more certainty that grazing activities will be managed in a manner beneficial to wildlife. The design features and proper use criteria included in the Selected Action also ensure that wildlife habitat will be improved at the same or faster rate than



Alternative 2 (Current Management). By eliminating livestock grazing, Alternative 3 would eliminate livestock impacts on wildlife habitat. This would allow habitat in undesired condition to improve at a faster rate than either of the other alternatives.

The project area contains desert bighorn sheep in both the Grant-Quinn and the White Pine ranges. Both of the action alternatives propose to continue sheep grazing in the Cherry Creek Allotment, which contains a portion of the occupied bighorn sheep habitat in the Grant-Quinn Range. I acknowledge that there are concerns about disease transmission from domestic sheep to bighorn sheep. However, under the fairly unique circumstances present in the grazing of the Cherry Creek Allotment, I believe the risk of disease transmission from the authorized activities is very small.

Several factors support my conclusion that the risk of disease transmission is small. The term grazing permit for the Cherry Creek Allotment only authorizes trailing the domestic sheep across the allotment for a continuous 2-week period. The trailing activities are only authorized in the winter, between the 1st of December and the 10th of February. The trailing activities generally follow the Adaven Road in Garden Valley, which parallels and briefly crosses the eastern boundary of the Forest in this area. See maps 32, 33, and 34 in the 2014 Final Supplement. The trailing activities are outside of the recognized habitat for the desert bighorn sheep on the Grant-Quinn Range. The trailing activities are separated from the desert bighorn habitat by dense pinyon-juniper stands, which bighorn sheep do not favor. Finally, the trailing activities occur when telemetry data for this herd indicates that most of the bighorn sheep are on the west side of the Grant-Quinn Range. These spatial, biological, and temporal factors all combine to create a reasonable determination that likelihood of contact and/or disease transmission associated with the domestic sheep trailing activities is very small.

I acknowledge that the Intermountain Region is developing a Bighorn Sheep Management Framework at this time. The Bureau of Land Management and the Forest Service are also preparing a National Greater Sage-Grouse Planning Strategy at this time. The results of the bighorn sheep framework and the sage-grouse planning strategy will be reviewed when they become available. It is possible that new information in the bighorn sheep framework and/or sage-grouse planning strategy may warrant a review of this decision.

Avoidance and/or Mitigation of Environmental Harm

Livestock grazing under the Selected Action will undoubtedly have impacts on environmental conditions in the project area. However, I believe that the proper use criteria (end-of-season utilization and streambank alteration) will operate to avoid and/or minimize environmental harm associated with the authorized activities. Through application of and adjustments to the proper use criteria levels and implementation of the design features, areas that are in functioning condition will be maintained in that condition and areas in less than functioning condition will be improved. Alternative 2 (Current Management) could be implemented in a manner that avoids and/or minimizes environmental harm associated with the authorized activities. Unlike the Selected Action, it lacks the express proper use criteria and many of the design features. This makes it less certain that environmental harm will be avoided or minimized as compared to the Selected Action. Alternative 3 (No Action/No Grazing) would result in less environmental harm than the other alternatives because it is not authorizing any activities that will cause environmental harm. I believe that the Selected Action will adequately avoid and/or minimize environmental harm associated with the authorized activities and better meet the purpose and need for this project.

Short-Term Use and Long-Term Productivity

Under the Multiple-Use Sustained Yield Act and the National Forest Management Act, all renewable resources are to be managed in such a way that they are available for future generations. Short-term uses, and their effects, are those that occur annually or within the first few years of project implementation.



Long-term productivity refers to the capability of the land and resources to continue producing goods and services long after the project has been implemented. Domestic livestock grazing can be considered a short-term use of a renewable resource. As a renewable resource, forage on rangelands can be sustained if the long-term productivity of the land is maintained.

The Selected Action maintains long-term productivity through the application of the proper use criteria (end-of-season utilization and streambank alteration). These moderate use levels have been shown to maintain or improve conditions on the rangelands. Alternative 2 (Current Management) does not have established proper use criteria. It relies on the within season triggers identified in the Forest Plan and adjustments to livestock management activities to maintain or improve rangeland conditions. Accordingly, it lacks the greater certainty and predictability that is offered by the Selected Action. By completely eliminating livestock from the project area, Alternative 3 (No Action/No Grazing) provides the greatest benefit to long-term productivity as compared to the other alternatives. However, Alternative 3 (No Action/No Grazing) offers no opportunity for short-term use of the renewable resources in the project. I believe that the Selected Action adequately maintains the long-term productivity of the renewable resources in the project area while authorizing short-term use of those resources.

Irreversible and Irretrievable Commitments

Irreversible commitments “describe the loss of future options.” Irreversible “applies primarily to the effects of use of nonrenewable resources, such as minerals or cultural resources, or to those factors, such as soil productivity that are renewable only over long periods of time” (FSH 1909.15, Zero Code, 05 – Definitions). Once these resources are gone, they cannot be replaced. The analysis in the 2014 Final Supplement indicates that none of the alternatives would result in irreversible commitments of nonrenewable resources.

Irretrievable commitments describe “the loss of production, harvest, or use of natural resources. For example, some or all of the timber production from an area is lost irretrievably while an area is serving as a winter sports site. The production lost is irretrievable; the action is not irreversible. If the use changes, it is possible to resume timber production” (FSH 1909.15, Zero Code, 05 – Definitions). The 2014 Final Supplement acknowledges that both of the action alternatives have irretrievable commitments to soil resources in the project area. These impacts are associated with concentrated livestock use near range developments (watering sites, fences, etc.). Around 1,112 acres (0.2 percent) of the project area is affected in this manner. As both of the action alternatives would continue using these developments, these effects would continue under both the Selected Action and Alternative 2 (Current Management). Under Alternative 3 (No Action/No Grazing), domestic livestock would be removed from the project area and no longer concentrating their use around these developments. Removal of the livestock would allow the soils in these small areas to slowly recover over time.

Non-Significant Amendment to the Forest Plan

There are several factors that support amending the Forest Plan to open the non-wilderness portion of the Troy Mountain Allotment to livestock grazing. This allotment was recommended for closure over 20 years ago for a number of reasons. The existing water developments (originally constructed in 1951) were in need of costly repairs. No funding was available at that time and there was no reason to believe that funding would be available in the future. Without properly functioning water developments, the capability of the allotment was drastically limited. The allotment also contains important winter range for mule deer and good habitat for desert bighorn sheep. Another reason included in the recommendation for closure was that a portion of the allotment was proposed for wilderness designation. Finally, the recommendation for closure asserted that closure of the allotment would meet Goals 19 and 14 of the Forest Plan. These reasons for closure are discussed in Section 1.6 Forest Plan Consistency in the 2014 Final Supplement.

I recognize that closing the Troy Mountain Allotment may have made sense 20 years ago, but a careful consideration of the current situation indicates that maintaining the closure is no longer appropriate. Since the allotment was closed, the water developments on the allotment have been repaired. In 2007, a temporary permittee was authorized to reconstruct the old water pipelines and replace seven troughs. Funding for three of the troughs came through the Rocky Mountain Elk Foundation. This allotment now has one of the better water systems on the Forest and the capability limitations have been remedied.

The Troy Mountain Allotment contains crucial winter range for mule deer, as classified by Nevada Department of Wildlife. The Selected Action establishes moderate utilization levels and manages the allotment to maintain or move towards desired ecological conditions. Through this approach, the Selected Action ensures that forage is retained for mule deer and winter range is maintained or improved for mule deer.

Parts of the allotment contain good desert bighorn sheep habitat. See Map 32 of the 2014 Final Supplement. Most of the occupied desert bighorn sheep habitat in the Troy Mountain Allotment reflected on Map 32 is within the Grant Range Wilderness. See Map 37 of the 2014 Final Supplement. Furthermore, the desert bighorn sheep in the area usually stay on the west side of the Grant-Quinn Range. See Map 33 of the 2014 Final Supplement. Map 34 of the 2014 Supplement includes telemetry data from the Nevada Department of Wildlife revealing the areas desert bighorn sheep use on the north end of the Grant-Quinn Range. Accordingly, re-opening the non-wilderness portion of the Troy Mountain Allotment should have little if any impact on desert bighorn sheep habitat. By leaving the Hooper Canyon and Irwin Canyon allotments vacant, by not re-opening livestock grazing in the wilderness portion of the Troy Mountain Allotment, and by restricting domestic sheep grazing on the Cherry Creek Allotment, my decision protects the desert bighorn sheep herd and habitat in this area.

Opening the non-wilderness portion of the Troy Mountain Allotment under the management direction included in the Selected Action allows it to contribute AUM production on the Humboldt National Forest while maintaining or improving range conditions.

My decision to open the non-wilderness portion of the allotment to grazing will not impact the Grant Range Wilderness. Due to the natural features that mirror the wilderness boundary in the Troy Mountain Allotment, livestock will not be drawn into the Wilderness. The land along this boundary is steep and densely vegetated with pinyon-juniper. These natural features combine to create an area that is not hospitable to livestock and will keep livestock from entering the Wilderness.

In summary, I find that my decision provides the best balance of use of the resources while also sustaining the health of the land for future use and enjoyment.

IV. Public Involvement

Public participation helps the Forest Service identify concerns with possible effects of its proposals. It is also a means of disclosing the nature and consequences of actions proposed for NFS lands.

The Forest developed a list of public individuals, organizations, governments, and agencies that would likely be interested in the project. These included grazing permittees, other landowners, advocacy and user-group organizations, county governments, Tribal governments, other federal agencies, Nevada State agencies, livestock industry groups, and local news media. We communicated with the public extensively during the EIS preparation. Highlights of this involvement are provided below.

- The project was listed on the Forest Service's Schedule of Proposed Actions (SOPA) on January 1, 2007. The SOPA entry has been updated every quarter, as necessary.
- The district ranger and staff met with the White Pine County Commission during public sessions in February 2007, to discuss and present information pertaining to the preparation of this EIS. An

update on the Ely Westside project was presented to the White Pine County Commission on June 9, 2010. In addition to White Pine County, Nye and Lincoln counties have received a quarterly briefing on this project since 2009 at the regularly scheduled tri-county meeting. The same briefing is shared with the Coordinated Resource Management Group for White Pine County.

- The district ranger and staff met with the Public Lands Use Advisory Committee (PLUAC) on January 16, 2007, to discuss and present information pertaining to the preparation of this EIS. Since 2009, two additional updates have been given to the PLUAC.
- Testimony was presented on this project before the Nevada Legislative Committee on Public Lands on July 30, 2010.
- Scoping letters were mailed to the local tribal governments on December 1, 2006. Follow-up meetings were held with various representatives of tribal governments, including:
 - ❖ Duckwater Shoshone Tribe (April 10, 2007, June 5, 2007, April 9, 2008, February 28, 2011, December 27, 2011, September 24, 2012)
 - ❖ Ely Shoshone Tribe (April 2, 2007, May 23, 2011, December 11, 2012)
 - ❖ Goshute Tribe (April 4, 2008, April 1, 2011)
 - ❖ Yomba Tribe (March 14, 2008)
- In December 2006, the Forest mailed letters to nearly 140 interested parties informing them that Forest was initiating the environmental analysis process for the Ely Westside Rangeland Project. The letter informed the public of the intent to prepare an environmental impact statement for this project and requested any additional issues that the public had regarding the authorization of livestock grazing within the project area.
- Members of the project interdisciplinary team met with permittees during Annual Operating Instruction (AOI) meetings in March of 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, and 2014. The interdisciplinary team members also met with permittees in October 2010 and January 2011 to discuss monitoring data and progress on the environmental analysis.
- In June 2011, a Draft Environmental Impact Statement for the Ely Westside Rangeland Project was mailed to agencies, organizations, and interested individuals. On July 1, 2011, the notice of availability of the DEIS for the 45 day comment period was published in the *Federal Register*. On July 7, 2011, a legal notice regarding the release of the DEIS and the 45 day comment period was published in the *Elko Daily Free Press*.
- In September 2011, a Final Environmental Impact Statement and Record of Decision for the Ely Westside Rangeland Project was mailed to agencies, organizations, and interested individuals. In January 2012, the Forest mailed a letter to agencies, organizations, and interested individuals informing them that the Record of Decision had been withdrawn.
- In August 2013, a Notice of Intent to prepare a Supplemental Environmental Impact Statement was published.
- In December 2013, a Draft Supplement to the 2011 FEIS was mailed to agencies, organizations, and interested individuals. On January 10, 2014, the notice of availability of the 2013 Draft Supplement for the 45 day comment period was published in the *Federal Register*. On January 14, 2014, a legal notice regarding the release of the DEIS and the 45 day comment period was published in the *Elko Daily Free Press*.
- In June 2014, the Final Supplement to the 2011 FEIS and a draft Record of Decision was mailed to agencies, organizations, and interested individuals.

V. Topics Raised during Public Comment on the DEIS and 2013 Draft Supplement.

The DEIS for the Ely Westside Rangeland Project was issued on June 23, 2011. The Notice of Availability for the DEIS was published in the Federal Register on July 1, 2011. The required 45-day comment period ended on August 15, 2011. The 2013 Draft Supplement was issued on December 30, 2013. The Notice of Availability for the 2013 Draft Supplement was published in the Federal Register on January 10, 2014. The required 45-day comment period ended on February 24, 2014.

Numerous and extensive comments were received on the DEIS and the 2013 Draft Supplement. In the process of preparing the 2011 FEIS and the 2014 Final Supplement to the 2011 FEIS, all comments were reviewed and responses provided in separate documents that are included with the 2011 FEIS and 2014 Final Supplement for public review. Because of the complexity and importance of topics raised in several of the comments, I am reviewing our responses to selected topics.

Monitoring Program

Several commenters asked us to provide additional detail regarding short-term and long-term elements of our monitoring program under Alternative 1 (Proposed Action and Selected Alternative). We clarified the monitoring program in the discussion in the 2011 FEIS and the 2013 Draft Supplement. However, I would like to share my thoughts on the monitoring program.

Some commenters were concerned about suggestions in the monitoring program that permittees would be participating in the monitoring. These commenters expressed doubt in the wisdom of having the permittees monitor their own activities. I want to make it clear that we are not transferring our responsibility to monitor the project area to the permittees. However, the permittee is ultimately responsible for ensuring that their livestock are moved as necessary to stay within the proper use levels established under the Selected Action). This requires permittees to conduct short-term monitoring of the proper use criteria.

Other comments suggested that we should do more monitoring and ensure that we monitor every allotment multiple times every year. The Selected Action includes a monitoring program that would conduct compliance monitoring every year on allotments where livestock grazing is authorized that year. See section 2.2.1.4.2. Implementation Monitoring (Short-Term) in the 2014 Final Supplement. Given the acreages involved and our current staffing, it is impossible for my staff to conduct short-term monitoring on all grazing on the Forest at all times, nor is it required by our agency directives. I acknowledge that this creates a risk that grazing could exceed the authorized standard in an area in any given year. While use that exceeds the authorized standard is always problematic, one year's exceedence should not necessarily be cause for alarm. See the response to comment EPA1 in the Response to Public Comments Concerning the Ely Westside Rangeland Project Draft Environmental Statement attached to the 2011 FEIS. This is not to suggest that exceeding the standard is acceptable or would be overlooked. The agency has a wide array of administrative actions that can be employed to address non-compliance with the terms of grazing permits, Allotment Management Plans, and Annual Operating Instructions. Under the Selected Action, an annual report summarizing the management actions, monitoring, and allotment administration conducted over the last year would be completed and distributed and/or made available on the Forest's website to livestock permittees, state and federal agencies, county and tribal governments, other cooperators, and interested individuals.

Long-term monitoring is a key element of the Selected Action. To assist with long-term monitoring, in 2010 we began funding a stand-alone monitoring team that is charged with on-going ecological monitoring of our range allotments. This team supplements the efforts of local range conservationists whose administration of the grazing permits will include monitoring of attainment of the proper use criteria.

Long-term monitoring will be done on every allotment at least every 5 years. See section 2.2.1.4.3. Effectiveness Monitoring (Long-Term) in the 2014 Final Supplement. This time frame was chosen because measurable changes in conditions occur slowly in the project area. More frequent monitoring is unlikely to result in any useful information. If grazing that exceeds the authorized levels occurs to the intensity and/or frequency that it measurably affects the conditions in an allotment, predetermined adjustment to the proper use criteria will be made. These adjustments are designed to improve conditions and would remain in effect until conditions improved. Other administrative remedies will also be considered, as appropriate.

Future ecological condition assessments (long-term monitoring) will focus on the matrix attributes (2011 FEIS Appendix A) that are affected by domestic livestock grazing. After the long-term monitoring data has been collected, attributes that are not in functioning condition would be evaluated to determine if domestic livestock grazing is affecting them. This evaluation would be documented as part of the long-term monitoring report. If the evaluation does not identify a causal link between the authorized grazing activities and an attribute that is not in functioning condition, then that attribute would not be considered in the project-level assessment of ecological condition or in a determination to adjust proper use criteria. Examples of situations where an attribute would not be used include conifer encroachment into aspen stands, pinyon-juniper encroachment into uplands, and water quality attributes affected by other activities.

Data on these non-grazing attributes would still be collected when monitoring is conducted so that the general condition of the area can be determined. However, these attributes would not be used to mandate adjustments in the proper use criteria for this project.

Forest Plan Considerations

Several commenters stated that we had inappropriately modified various Forest Plan standards, particularly as contained in Forest Plan Amendment 2, without proper subsequent amendment.

As reviewed in the “Alternatives” section below, Forest Plan Amendment 2 assigns significant responsibility and discretion to project ID Teams to design proper-use criteria that account for the full spectrum of resource needs and values, and recognize that proper-use criteria may vary from the default standards of Forest Plan Amendment 2. The opportunity for the ID Team to develop and recommend lower utilization values than the maximum values set by Amendment 2 was recognized by the United State District Court of Nevada in 1995 in Bell v. Secretary of the United States Department of Agriculture, (CV-N-92-75-HDM (PHA)). The ID Team has recommended these values with which I have concurred. I also believe that this decision will help us attain the Forest Plan goal that directs us to “Manage all allotments to maintain suitable range presently in satisfactory ecological condition, and improve suitable range that is in less than satisfactory condition.”

Section II of this ROD (“Decision”) also clarifies how we intend to implement this decision consistent with the approach to proper-use criteria in Forest Plan Amendment 2. The Amendment 2 proper-use criteria are enforceable at any time of the year, the equivalent of within-season triggers, and not merely end-of-season criteria.

Data Quality and Science Review

Several commenters objected to the quality of our site condition data, either as a basis for changing current grazing management direction, or displaying the actual impacts of past, current, and future grazing.

I acknowledge that our project area condition data does not completely describe current or past condition or condition trends. However, I believe our data is sufficient to draw reasonable inferences on the impacts of past activities and the current condition of the allotments in the project area. This information, coupled with a review of scientific findings on grazing under conditions similar to those on the Ely

Westside Rangeland project area, and a review of the science on ecosystem management indicates a need to change some of our grazing management criteria.

Several commenters critiqued our coverage of the issue of climate change and potential impact on a host of resources in the Great Basin. As we discuss in the 2011 FEIS and the 2014 Final Supplement, conclusions on the specific impacts of climate change on areas such as the Ely Westside Rangeland project area remain highly speculative and the contribution of greenhouse gases (GHGs) from this project are extremely small. However, as also discussed in the 2011 FEIS and the 2014 Final Supplement, the monitoring system envisioned in Alternative 1 (Proposed Action and Selected Action) will track changes to ecosystems from a variety of causes, including climate change. The Selected Action provides mechanisms to adjust grazing management in response to undesirable ecosystem changes, whether caused by grazing itself or other influences such as climate change or a combination of factors. This monitoring system will also provide the information necessary to adjust future decisions as necessary to our grazing management program.

Capability and Suitability of Rangelands

One commenter was particularly critical of our analysis and use of rangeland capability and suitability determinations. The commenter objected to the notion that the Forest Service would allow livestock grazing on allotments that contained a large percentage of lands rated as “not capable”. This commenter also noted that if given the opportunity, livestock will forage both on “capable” and “non-capable” lands and that this use of “non-capable” lands would be particularly objectionable.

In responding to this comment we note the purpose and use of capability analyses. These analyses historically were developed to determine the stocking capacity of allotments, i.e. how many head of livestock could be placed on an allotment and for how long. This capacity was related to the quality and availability of forage for livestock. Portions of the allotment not producing sufficient forage because of soil condition or other vegetative competition were rated as “not capable”. In addition, excessively steep slopes or portions of an allotment too far from water were rated as “not capable”, regardless of forage production. All of these non-capable lands were then subtracted from the land base in determining the initial livestock carrying capacity. Livestock grazing that might occur on non-capable lands did not factor into the capacity determination.

Obviously, the determination that a portion of an allotment is non-capable does not mean that livestock will not choose to use the area. It also does not necessarily imply that livestock use of these lands is unacceptable from an environmental perspective. The analysis in the 2011 FEIS and the 2014 Final Supplement considers the effects of the alternatives on both capable and non-capable lands. It is also important to note that the Selected Action approach to managing livestock on the Ely Westside Rangeland project area is based less on managing livestock numbers and duration, and more on the management of range condition, regardless of the number of cattle. Capacity analysis would provide an estimate of the appropriate stocking rate; but proper use criteria would ultimately determine acceptable use. When forage capacity has been reached, then it is important for livestock to leave the allotment.

A more relevant question is which lands in the project area are suitable for livestock grazing. Suitability refers to the appropriateness of applying certain resource management practices (for example, domestic livestock grazing) to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses that would be foregone. The ID Team reviewed the suitability determination that was made under the Forest Plan and conducted a suitability review of the project area. As a result of these reviews, the ID Team concluded that the project area contained seven areas, totaling 3,413 acres, which were not suitable for livestock grazing. Two research natural areas (RNAs) were included in this group: the Currant RNA (735 acres) and the Troy Peak RNA (2,645 acres). These RNAs are discussed in the Wilderness section in chapter 3 of the 2011 FEIS and the 2014 Final Supplement. Livestock grazing will not be authorized in these RNAs.



As part of this project-level analysis we also reviewed the capability determinations for management indicator species (MIS) made in connection with development of the Forest Plan. We confirmed that the results of these Forest Plan calculations were appropriate and are still applicable.

The Selected Action is also designed to restore MIS habitat where needed. By monitoring environmental parameters that indicate ecosystem function, we have the basis for adjusting livestock use where necessary to restore ecosystem function. As discussed extensively in the 2011 FEIS and the 2014 Final Supplement, as ecosystem function improves habitat for all MIS species also improves.

Cumulative Effects

The 2011 FEIS cumulative effects analysis area for the project is identified by resource in chapter 3 of the 2011 FEIS. As appropriate, this analysis has been updated in the 2014 Final Supplement. In general, the cumulative effects analysis areas include all public and private lands within or near the boundaries of the National Forest System land on the Grant-Quinn and White Pine ranges. The analysis considered activities and management actions on both public and private lands.

Adequate presentation of the cumulative effects of a proposed action and all the other past, ongoing, and possible activities in the analysis area is a perennial issue in NEPA compliance. In theory, effects can be additive ($2+2=4$), synergistic ($2+2=5$), or antagonistic ($2+2=3$). The practical difficulty is that effects from different activities are rarely on the same scale, intensity, or duration, and thus their effects rarely accumulate in neat, quantitative fashions. For example:

- The cows that graze in Ely Ranger District are all methane-emitters. Methane is a greenhouse gas and thus this project contributes to the total global burden of these gasses, though our analysis shows this project's contribution is vanishingly small in comparison. Our calculations reveal that the livestock in the project area are likely to emit methane that is equivalent to 671 metric tons of carbon dioxide. While this may seem like a large amount, that perception changes when it is put in perspective. In 2008, livestock in the United States produced the equivalent of 148,600,000 metric tons of carbon dioxide and the EPA does not require a facility to report carbon dioxide emissions unless they exceed 25,000 metric tons of carbon dioxide a year.
- The National Forest System (NFS) lands in the Ely Ranger District are surrounded by BLM and private lands, which are also used for grazing. Several NFS permittees also have grazing permits on neighboring BLM public lands. Some streams from NFS allotments flow onto private and BLM lands, and pollutants carried from NFS operations combine with that of other grazing operations. In general, cumulative effects of the project are small, and water quality monitoring of our streams indicates that these effects are generally at levels compatible with State standards.
- Invasive species such as cheatgrass or various noxious weeds have expanded. As discussed in the FEIS, concentrated use by livestock may have accelerated the introduction of these infestations. The scientific conclusions on the role of grazing in continuing the spread of invasive species are varied. It is clear, however, that poorly managed grazing operations can weaken the resistance of desirable species and exacerbate the impacts of wildfires to native plant communities.
- Current grazing developments or other implementation actions include fences, water developments, and salt and mineral placements. These are often intended to reduce impacts of grazing in sensitive riparian areas. However, all three can concentrate cattle, resulting in unavoidable soil compaction and vegetation trampling. Fences can also interfere with wildlife movements and provide perches for avian predators which are significantly impacting sage grouse and other bird species in some areas.

At least one commenter complained that our cumulative effects analysis was too qualitative and was not sufficiently rigorous. I acknowledge that the 2011 FEIS and 2014 Final Supplement are qualitative in

many instances where specific data may not be available; nonetheless, our considerations took a hard look at the issue. My selection of a course of action weighed our options to reduce these cumulative effects. I believe that careful implementation of the Selected Action will help lessen many of these impacts by restoring and maintaining functioning ecosystems that are resilient to some level of disturbance.

VI. Alternatives Analyzed in Detail

Based on public comments, agency policy, the Humboldt National Forest Land and Resource Management Plan (Forest Plan), and the Council on Environmental Quality regulations implementing the National Environmental Policy Act (NEPA), the ID Team developed three alternatives (including the Proposed Action) for detailed analysis. The alternatives are described in detail in Section 2.2 of the 2014 Final Supplement. Summaries of the alternatives follow.

Alternative 2-Current Management would continue currently authorized grazing allotment management, as guided by Forest Plan standards, including the default “use criteria” provided by Forest Plan Amendment 2. The Big Creek, Hooper Canyon, and Irwin Canyon allotment would remain vacant and the Troy Mountain Allotment would remain closed. No grazing would be authorized in these four allotments. Alternative 2 (Current Management) includes the design features for sensitive plants and cultural resources that are part of Alternative 1 (Proposed Action). See Section 2.2.2.1 of the 2014 Final Supplement for additional information on these design features.

Alternative 3-No Action/No Grazing would require an immediate cessation of grazing. It serves as the baseline for comparing environmental impacts and exploring the conditions necessary to provide a sustainable grazing program that protects critical resources and provides functioning ecosystems.

Alternative 1-Proposed Action was presented in the 2011 DEIS and the 2013 Draft Supplement as the preferred alternative. It would continue grazing on nine of the 12 allotments under a modified set of conditions and criteria that vary from the default maximum utilization standards of Forest Plan Amendment 2, but are consistent with Amendment 2, which specifically accommodates changes from the default standards. As directed in Amendment 2, the ID Team conducting this project-specific analysis examined the applicability of the default standards, considering the full spectrum of resource needs and values.

Alternative 1 (Proposed Action) bases proper-use criteria levels on ecological condition. The better the ecological condition of the allotment, the greater the amount of forage livestock would be permitted to use. Conversely, on allotments that are in functioning-at-risk or non-functioning condition, livestock would be allowed less use of forage to encourage recovery of ecological function.

Table 9 in attachment 1 to this ROD outlines the numerical relationship between proper-use criteria and ecological condition. This table sets the maximum use allowable for each vegetation habitat group by condition. This table provides the basis for the use criteria presented in table 7 in attachment 1 for the nine allotments. The development of these criteria is discussed in greater detail in this ROD in the “Decision” and “Decision Rationale” sections below.

Alternative 1 (Proposed Action) requires a monitoring system to assess the ecological condition of the allotments on a periodic basis (approximately every 5 years). Depending on the ecological condition, proper-use criteria could change for an individual allotment in accord with the relationships outlined in table 9 in attachment 1.

Alternative 1 (Proposed Action) also includes several design criteria to provide additional protection for resources, such as sensitive plants and wildlife. These design criteria are outlined in Section 2.2.1.2 of the 2014 Final Supplement and included in this ROD (attachment 1). All areas that may be impacted by future livestock concentration activities would be evaluated by agency personnel for conformance with these design criteria prior to agency approval of the activity.

VII. Alternatives Considered but not Analyzed in Detail

The 2011 FEIS and the 2014 Final Supplement present several alternatives considered by the ID Team, but not analyzed in detail. As discussed above, four issues were identified during the scoping process. Those issues were addressed through refinements in Alternative 1 (Proposed Action), which eliminated the need to develop additional alternatives regarding those issues. The refined Alternative 1 (Proposed Action) was included in the DEIS for review and comment.

We received requests to develop alternatives that address specific concerns. One commenter suggested that it would be appropriate to have an alternative that addressed weed infestation. This alternative was not considered in detail for several reasons. First, an alternative designed purely to address weed infestation would not meet the purposed and need for this project. Second, Alternative 1 (Proposed Action) addresses weed infestations through a passive restoration process. Rather than actively attacking weed infestations, Alternative 1 (Proposed Action) proposes livestock management under terms and conditions that will reduce selective foraging on native plants, allowing them to compete better with undesired plants.

Another suggested alternative involved reductions in the stocking rate in the project area. This alternative was not considered in detail because it is how livestock are managed, not simply the number of livestock, that controls the effects of livestock grazing. The effects of grazing are controlled through timing, intensity, and duration. Reducing stocking rates without taking these factors into consideration would not result in any predictable outcome. Alternative 1 (Proposed Action) manages livestock activities based on the ecological conditions in the area and sets the proper use criteria (end-of-season utilization and streambank alteration) to coincide with the ecological condition. Whether there are 50 or 100 head of livestock on the allotment, the end-of-season utilization and streambank alteration levels within the various habitat groups would still be based on the ecological condition of those habitat groups. For example, if the uplands (non-riparian) in an allotment have been found to be functioning-at-risk, the herbaceous end-of-season utilization level for that habitat group would be set at 40 percent or lower. If there are 50 head of livestock on the allotment, then the utilization limit would be reached more slowly than if there were 100 head of livestock.

One commenter suggested that there should be an alternative to minimize harm to ground dwelling animals. We agree that concentrated livestock use can impact ground dwelling animals. This alternative was not considered in detail because we believe it is addressed by Alternative 1 (Proposed Action), which includes a design feature that prohibits concentrated livestock use near important habitat for wildlife, including ground dwelling animals. Sage grouse are protected by a 0.5 mile buffer around nests or leks. Pygmy rabbits are protected by a 100 foot buffer around their burrows. Mammals and birds that use aspen and riparian habitats are protected by 0.25 mile buffers around those habitats.

During the comment period on the 2013 Draft Supplement to the 2011 FEIS, the Forest received a request to develop a new alternative. The suggested alternative contained many elements, but the overall theme of the suggested alternative was to remove all range developments from the project area, set standards for utilization, trampling, and brush breakage at very conservative levels, and reduce livestock stocking rates so the proposed standards could be met. The Forest took a hard look at this suggested alternative, which is documented in the responses to comments that accompany this Supplement. After thoughtful consideration of this alternative, it was determined that the suggested alternative should not be considered in detail for several reasons. First, the removal of all range developments and application of very conservative standards does not meet one of the elements of the purpose and need for this project. These actions from the suggested alternative would substantially reduce (or even eliminate) grazing in the project area. Accordingly, the suggested alternative would substantially limit the ability of the project to contribute to the overall desired animal use month (AUM) production for the Humboldt National Forest. See section 1.3 Purpose and Need for Action for additional information on the purpose and need. Second,

nearly all of the elements of the suggested alternative are addressed in one of the alternatives already being considered in detail. Third, when all the elements of the suggested alternative are considered as a whole, they create an alternative that is essentially equivalent to Alternative 3 (No Action/No Grazing). The suggested standards are so low that they are likely to be exceeded almost as soon as grazing livestock entered an area. This would create a grazing management system that required livestock to be moved from an area almost as quickly as they were moved into an area.

VIII. Environmentally Preferred Alternative

Alternative 3 (No Action/No Grazing) is the environmentally preferred alternative, as defined in 36 CFR 220.3. Alternative 3 (No Action/No Grazing) would end livestock grazing in the project area, which would remove effects of livestock grazing and result in the least harm to the biological and physical environment. For this same reason, Alternative 3 (No Action/No Grazing) would best protect and preserve historic, cultural, and natural resources.

IX. Determination That Amendment is Not Significant

The 2011 FEIS and the 2014 Final Supplement disclose the potential impacts that are associated with approving the Proposed Forest Plan Amendment. See the following sections in the 2014 Final Supplement: 1.6 Forest Plan Consistency, 3.2.4 Environmental Consequences for Soil Quality, 3.3.4 Environmental Consequences for Water Quality, 3.4.4 Environmental Consequences for Vegetation, 3.5.4 Environmental Consequences for Wildlife, 3.6.4 Environmental Consequences for Sensitive Plants, 3.7.4 Environmental Consequences for Wilderness, 3.8.4 Environmental Consequences for Cultural Resources, 3.9.4 Environmental Consequences for Socio-Economics. Forest Service Manual (FSM) 1920, Chapter 1926.5 recognizes the need to amend a land management plan may arise from several sources, including:

2. Findings that existing or proposed permits, contracts, cooperative agreements, and other instruments authorizing occupancy and use are not consistent with the land management plan, but should be approved.

Amendment 1 to the Forest Plan includes language to continue the closure on the Troy Mountain C&H Allotment to domestic livestock grazing. The allotment was recommended for closure in 1988 due to capability problems resulting from water developments that needed costly maintenance. The closure was also based on potential resource conflicts, such as winter range for mule deer, habitat for bighorn sheep, and land with wilderness potential. See Section 1.6 Forest Plan Consistency of the Final Supplement for additional information on the rationale for closing the Troy Mountain Allotment.

Since that time, the circumstances surrounding the Troy Mountain Allotment have changed. The water system has been reconstructed, dramatically improving the capability on this allotment. The Selected Action's application of moderate utilization levels, coupled with adjustments based on changes in ecological conditions ensures that the habitat for mule deer, desert bighorn, and other wildlife and plant species is protected. Since the closure of the Troy Mountain Allotment, the Grant Range Wilderness has been designated, which overlaps a portion of the Troy Mountain Allotment. My decision does not open the portion of the Troy Mountain Allotment that is within the Grant Range Wilderness. This decision not only protects the Grant Range Wilderness, it provides further protection for desert bighorn sheep habitats. My decision also balances Forest Plan desired conditions and goals by authorizing grazing under terms that will maintain or move rangelands towards desired conditions. In doing so, my decision produces AUMs (Forest Plan Desired Conditions for Range, p. IV-84) while reducing conflicts with and improving wildlife habitat (Forest Plan Goals 14 and 19 for Wildlife and Fisheries, pp. IV-4 and IV-6). Under the

current circumstances, it is appropriate to authorize livestock grazing on a portion of this allotment again.

I have reviewed Forest Service Manual (FSM) 1920, Chapter 1926.51 and find that the amendment falls within circumstances that could result in changes to the land management plan that are **not significant** and have determined the following for the amendment:

1. Actions that do not significantly alter the multiple-use goals and objectives for long-term land and resource management.

The amendment does not alter multiple-use goals and objectives for long-term land and resource management.

2. Adjustments of management area boundaries or management prescriptions resulting from further on-site analysis when the adjustments do not cause significant changes in the multiple-use goals and objectives for long-term land and resource management

The amendment does not adjust management area boundaries, management prescriptions, or alter multiple-use goals and objectives for long-term land and resource management.

3. Minor changes in standards and guidelines

The amendment involves the removal of management direction from the Grant Range Wilderness Management Area. The amendment applies only to the 33,822 acres in the Troy Mountain Allotment that lie outside of the Grant Range Wilderness. This entire allotment was open to livestock grazing at the time the Forest Plan was prepared.

4. Opportunities for additional projects or activities that will contribute to achievement of the management prescription.

The closure limits the Forest's ability to move toward the desired conditions expressed in the Forest Plan regarding the production of AUMs. Under the terms of the Selection Action, opening the allotment to livestock grazing will allow the project area to contribute an additional 538 head months (HMs) towards the Humboldt National Forest production goal of 316,620 animal use months (AUMs) (p. IV-84 of the Forest Plan) without detracting from other goals in the Forest Plan.

I have also considered FSM 1920, Chapter 1926.52 and find that the proposed amendment would not result in circumstances that may cause significant change to a land management plan:

1. Changes that would significantly alter the long-term relationship between levels of multiple-use goods and services originally projected.

The amendment opens the portion of the Troy Mountain Cattle and Horse Allotment that is outside of the Grant Range Wilderness to grazing. This allotment was open at the time the Forest Plan was prepared and considered in the projections made at that time. Furthermore, the Animal Use Months (AUMs) associated with this allotment are relatively small when compared to the total AUMs for the Forest.

2. Changes that may have an important effect on the entire land management plan or affect land and resources throughout a large portion of the planning area during the planning period.

This amendment only applies to the Troy Mountain Cattle and Horse Allotment, which represents a very small portion of the part of the Humboldt-Toiyabe National Forest covered by the Humboldt Forest Plan. Also, this amendment is being made towards the end of the planning period; 25 years since the Forest Plan went into effect.

Determination of Not Significant Amendment

Based on the associated environmental analysis and above considerations, I have determined that this proposed Forest Plan amendment is not significant. Appropriate public notification of the amendment was provided through the NEPA procedures, as described in chapter 1 of the DEIS.

X. Findings Required by Other Laws and Regulations

National Forest Management Act: This decision is consistent with the standards, guidelines, and management direction included in the Humboldt National Forest Land and Resource Management Plan (as amended). As documented in section 1.5. Rangeland Capability and Suitability in the 2014 Final Supplement and the 2011 FEIS, forest-level and project level rangeland capability and suitability analyses were conducted in 2008 and 2011, respectively, and validated the rangeland capability and suitability calculations made when the Forest Plan was developed.

Endangered Species Act: As documented in chapter 3 of the 2014 Final Supplement and the project record, there are no species listed under the Endangered Species Act (ESA) in the project area.

Environmental Justice (Executive Order 12898): As documented in Socio-Economics section in chapter 3 of the 2014 Final Supplement, my decision will have no disproportionate effects on minority populations or low-income populations.

National Historic Preservation Act: The Forest has complied with the 1995 Memorandum of Understanding between the Forest and the Nevada State Historic Preservation Office regarding the effects of livestock management on historical properties. Continued adherence to this MOU satisfies the agency's requirements under Section 106 of the National Historic Preservation Act.

Clean Water Act: Based on the discussions in chapter 3 of the 2014 Final Supplement and the project record concerning hydrology, this decision is consistent with the Clean Water Act and amendments. No permits are required for implementation of the decision.

Clean Air Act: This decision is in compliance with the Clean Air Act, which defines the National Ambient Air Quality Standards (NAAQS) for various sources of pollutants that must be met to protect human health and welfare, including visibility.

Migratory Bird Treaty Act and Executive Order: Based on the discussions in chapter 3 of the 2014 Final Supplement and the project record concerning migratory birds, this decision is in compliance with the act, subsequent Executive Order 13186, and memorandum of understanding between the USDI Fish and Wildlife Service and USDA Forest Service, which provides for the protection of migratory birds.

Executive Order 11990 of May 1977 (Wetlands): This executive order requires the Forest Service to take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands. In compliance with this order, Forest Service direction requires that an analysis be completed to determine whether adverse impacts would result. The 2014 Final Supplement and the project record confirm that the decision complies with EO 11990 by maintaining and restoring riparian conditions.

Executive Order 11988 of May 1977 (Floodplains): This executive order requires the Forest Service to provide leadership and to take action to (1) minimize adverse impacts associated with occupancy and modification of floodplains and reduce risks of flood loss; (2) minimize impacts of floods on human safety, health, and welfare; and (3) restore and preserve the natural and beneficial values served by flood plains. The 2014 Final Supplement and the project record confirm that the decision complies with EO 11988 by maintaining floodplain integrity.

XI. Implementation Date

I intend to implement this decision as soon as possible. During the winter of 2014-2015, Allotment Management Plans will be updated to include the direction provided in this Decision. The Annual Operating Instructions for the 2015 grazing season will implement the direction provided in this Decision.

Under the Secretary of Agriculture's Predecisional Administrative Review Process (Objection Process) regulations at 36 CFR 218.12, the earliest possible implementation date is: a) five business days from the close of the objection filing period if no objections are filed, or b) immediately after the Record of Decision is signed if an objection is filed.

XII. Disposition of Objections

This decision was subject to the Predecisional Administrative Review Process (Objection Process) pursuant to 36 CFR 218, subparts A and B. No timely objections were received prior to the close of the objection filing period.




XIII. Contact

For additional information concerning this decision, contact:

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William A. Dunkelberger
Forest Supervisor



Date



XIV. References

- Rosgen, D.L. 1996. Applied River Morphology. Wildland Hydrology, Pagosa Springs, CO.
- USDA Forest Service. 1986. The Humboldt National Forest Land and Resource Management Plan. United States Forest Service, Humboldt National Forest. 306 pp and 11 Appendices.
- USDA Forest Service. 2012. Interim Conservation Recommendations for Greater Sage-Grouse and Greater Sage-Grouse Habitat. USDA Forest Service Regions 1, 2, and 4. October 2, 2012.
- USDI Bureau of Land Management. 2013. Draft Land Use Plan Amendment/Draft Environmental Impact Statement for the Nevada and Northeastern California Sub-Region. USDI BLM, Nevada and California State Offices. USDA Forest Service, Humboldt-Toiyabe National Forest. November 1, 2013.

Attachments

Attachment 1 - Selected Action (Alternative 1 – Proposed Action) (Excerpt from the 2014 Final Supplement to the 2011 Final Environmental Impact Statement for the Ely Westside Rangeland Project)

Attachment 2 – Non-Significant Forest Plan Amendment to Open the Troy Mountain Cattle and Horse Allotment

Attachment 1

Selected Action

(Alternative 1 – Proposed Action)

Excerpt from the 2014 Final Supplement to the 2011 Final Environmental Impact Statement
for the Ely Westside Rangeland Project

CHAPTER 2: ALTERNATIVES (INCLUDING THE “PROPOSED ACTION”)

2.1. Introduction

This chapter describes and compares the alternatives considered for addressing the Ely Westside Rangeland Project’s purpose and need. It also includes a discussion of how alternatives were developed, descriptions of the alternatives considered in detail, and a comparison of the alternatives in terms of relevant issues. Mitigation and monitoring efforts for the project are also summarized. Chapter 2 presents the alternatives in comparative form, sharply defining the issues and providing a clear basis for choice by the decision maker. A detailed discussion of the effects of the alternatives and other environmental considerations can be found in chapter 3.

2.2. Alternatives Considered in Detail

In response to Forest Service handbook (FSH) direction and issues raised by the public, the Forest Service developed three alternatives:

- Alternative 1 (Proposed Action)
- Alternative 2 (Current Management)
- Alternative 3 (No Action/No Grazing)

Each of these alternatives is described in detail in the following subsections.

2.2.1. Alternative 1: Proposed Action

Alternative 1 (Proposed Action) was developed to meet the purpose and need for the Ely Westside Rangeland Project. The objective of this alternative is to manage these National Forest System lands to provide sustainable livestock grazing opportunities while protecting and improving essential ecosystem functions and values. Alternative 1 (Proposed Action) relies on the current ecological condition of the rangelands to set annual proper use criteria, provides for future changes in these criteria as a result of a change in the ecological condition, and provides for various grazing practices and strategies to be implemented to allow grazing activities to contribute to achieving the desired ecological condition. This alternative would set proper use criteria for habitat groups based on three possible ecological conditions (functioning, functioning- at-risk, and non-functioning).

Alternative 1 (Proposed Action) would:

- ✓ Reauthorize grazing on the Blackrock, Cherry Creek, Currant Creek, Ellison Basin, Illipah, Pine Creek/Quinn Canyon, Tom Plain, and Treasure Hill allotments.
- ✓ Authorize grazing on the Troy Mountain Allotment under a term grazing permit (allotment is currently closed, but being grazed under a temporary permit). This action would require a non-significant amendment to the Forest Plan to open the allotment to livestock grazing.
- ✓ Not authorize grazing on the Big Creek, Hooper Canyon, and Irwin Canyon allotments (which would remain vacant).
- ✓ Set proper use criteria (end-of-season utilization and streambank alteration levels) and within season triggers to determine when livestock should be moved or removed. The proper use criteria, set out below in table 7, are based on the current ecological condition for each habitat group within each allotment.

- ✓ Apply design features to minimize the impacts or potential impacts of grazing and associated activities.
- ✓ Conduct short-term and long-term monitoring to determine if adjustments to grazing are necessary.
- ✓ Make prescribed adjustments to the proper use criteria based on ecological condition assessments conducted under long-term monitoring.

No new structural developments, such as water developments or fences, are being proposed under this alternative. Future structural developments may be required and approved under a site-specific NEPA analysis. Maintenance of existing structural developments would continue as outlined in the individual term grazing permits and annual operating instructions (AOIs).

Under this alternative, National Forest System (NFS) lands would be managed to provide sustainable livestock grazing opportunities while protecting and improving essential ecosystem functions and values. The kind and number of livestock would remain the same as currently permitted or as identified on the last authorized term grazing permit. In general, the size of livestock operations has declined since the late 1800s; thus, to move range conditions to functioning condition, the current permitted numbers were determined to be appropriate for initial stocking rates. The development of the current stocking rates is discussed above in section 1.1.4 History of Allotments. Annual adjustment to the proper use criteria and various grazing practices and strategies would continue to be implemented to allow grazing activities to contribute to achieving the desired ecological condition.

Under this alternative, the grazing seasons would continue to vary by allotment with the typical permit season lasting approximately 3.5 months. *Under this alternative, the maximum use dates and head months are listed in table 6, by allotment.* Three of the allotments would remain vacant and would and would *only* be available for new term grazing permits after additional site-specific NEPA analysis (*Map 3*). Additional information on *these allotments* is *located in the project record in Section 05 Resources, Tab 09 Range.*

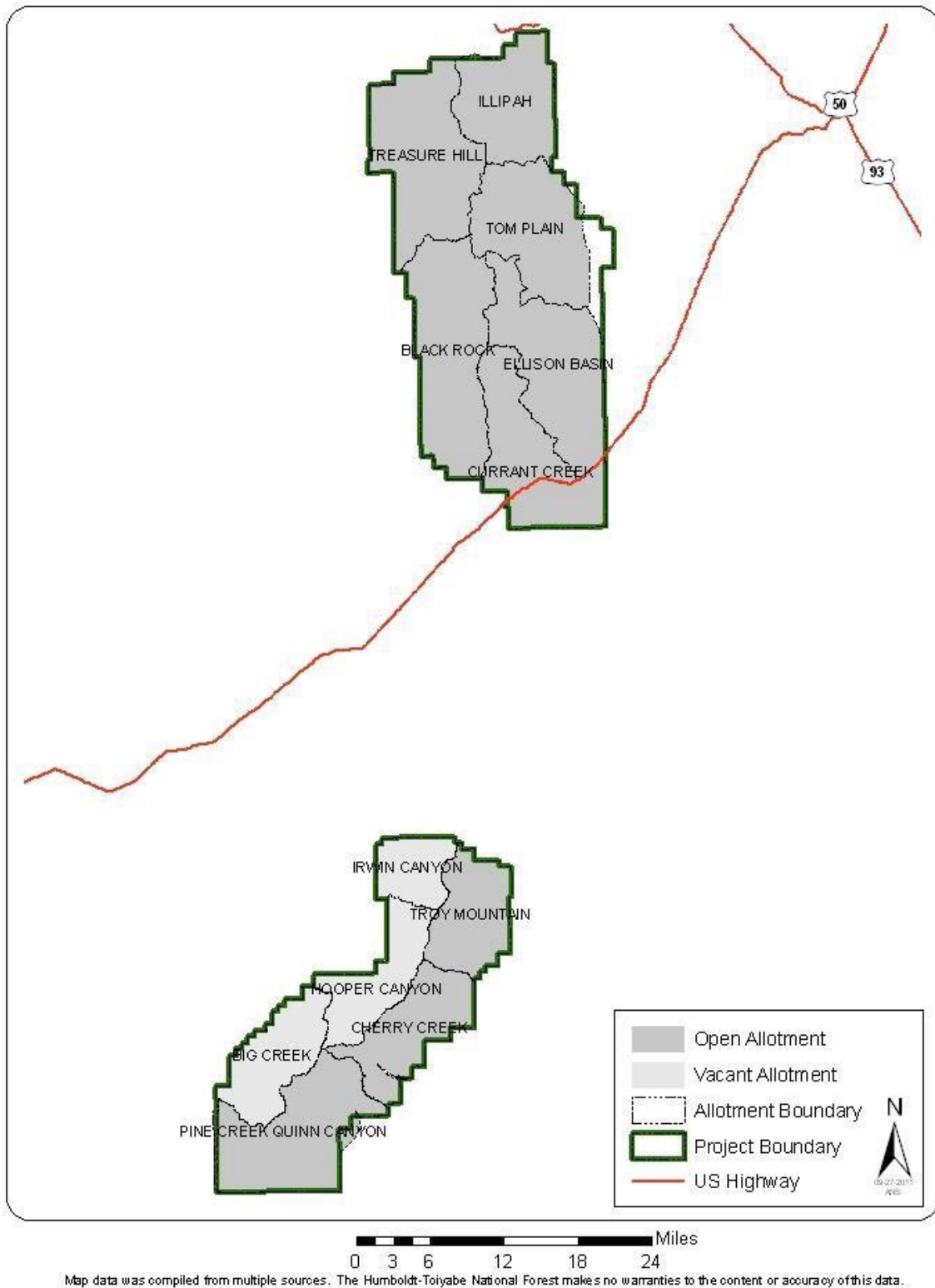
Table 1: Type and Number of Animals, Analyzed Season of Use, Maximum Head Months, and Maximum Days Grazed Under Proposed Action.

ALLOTMENT NAME	TYPE	NUMBER OF ANIMALS	ANALYZED SEASON OF USE	MAXIMUM HEAD MONTHS	MAXIMUM DAYS GRAZED
Big Creek	C&H ¹	Vacant	<i>Vacant</i>	Vacant	<i>N/A</i>
Blackrock	C&H ¹	122 cow/calf	<i>June 1 - Oct. 31</i>	409	<i>102</i>
Cherry Creek	S&G ²	1,800 dry sheep	<i>Dec. 1 – Feb. 10</i>	828	<i>14</i>
Currant Creek	C&H ¹	295 cow/calf	<i>June 1 – Oct. 31</i>	1,047	<i>108</i>
Ellison Basin	C&H ¹	359 cow/calf	<i>June 1 – Oct. 31</i>	1,440	<i>122</i>
Hooper Canyon	C&H ¹	Vacant	<i>Vacant</i>	Vacant	<i>N/A</i>
Illipah	C&H ¹	169 cow/calf	<i>June 1 – Oct. 31</i>	678	<i>122</i>
Irwin Canyon	C&H ¹	Vacant	<i>Vacant</i>	Vacant	<i>N/A</i>
Pine Creek/Quinn Canyon	C&H ¹	260 cow/calf	<i>May 1 – Sept. 30</i>	1,043	<i>122</i>
Tom Plain	C&H ¹	500 cow/calf	<i>June 1 – Oct. 31</i>	2,005	<i>122</i>
Treasure Hill	C&H ¹	415 cow/calf	<i>June 1 – Oct. 31</i>	1,665	<i>122</i>
Troy Mtn.	C&H ¹	150 cow/calf	<i>May 1 – Sept. 30</i>	538	<i>109</i>
Permitted C&H Grazing Totals		2,270		8,825	
Permitted S&G Grazing Totals		1,800		828	

¹ C&H = Cattle and horse allotment.² S&G = Sheep and goat allotment.

Permitted dates would remain the same, but grazing may be adjusted to address seasonal concerns. Grazing would not exceed the maximum head months or the maximum days grazed. Grazing would not be authorized outside of the analyzed season of use.

Map 1: Alternative 1: Proposed Action



2.2.1.1. Maximum Forage Utilization and Streambank Alteration

Table 7 displays the proper use criteria that would initially be applied for each allotment within the project area. Utilization would be measured as a percent by weight and would be based on end of the growing season conditions and streambank alteration would be based on a percentage of natural streambank stability. Within season triggers for the movement of livestock would also be used and are discussed in greater detail below in the Proper Use Criteria section. The highest proper use rates for each habitat group are assigned to allotments that are in functioning condition. Proper use at these levels is expected to maintain these areas in functioning condition. Proper use rates for habitat groups in functioning-at-risk or non-functioning condition are lower than the functioning category. Proper use under these rates is expected to allow these habitat groups to move toward and become functioning.

Table 2: Ecological Conditions and Proper Use Criteria by Habitat Group and Allotment.

F = Functioning, FR = Functioning-at-Risk, NF = Non-functioning, N/A = Not Applicable (habitat group does not occur in significant quantity on the allotment)

Allotments	HABITAT GROUP/PROPER USE CRITERIA												
	ALL MEADOWS			ASPEN/ COTTONWOODS			STREAM/RIPARIAN				UPLANDS		
	Ecological Condition	Allowable Utilization		Ecological Condition	Allowable Utilization		Ecological Condition	Allowable Utilization		Streambank Alteration	Ecological Condition	Allowable Utilization	
		Woody	Herbaceous		Saplings	Herbaceous		Woody	Herbaceous			Woody	Herbaceous
Big Creek	FR	N/A	N/A	FR	N/A	N/A	FR	N/A	N/A	N/A	FR	N/A	N/A
Blackrock	FR	25%	35%	FR	25%	35%	FR	25%	35%	20%	FR	25%	40%
Cherry Creek	FR	25%	35%	FR	25%	35%	FR	25%	35%	20%	FR	25%	40%
Currant Creek	FR	25%	35%	FR	25%	35%	FR	25%	35%	20%	FR	25%	40%
Ellison Basin	FR	25%	35%	FR	25%	35%	FR	25%	35%	20%	FR	25%	40%
Hooper Canyon	FR	N/A	N/A	FR	N/A	N/A	NF	N/A	N/A	N/A	FR	N/A	N/A
Illipah	FR	25%	35%	FR	25%	35%	F	35%	45%	20%	FR	25%	40%
Irwin Canyon	FR	N/A	N/A	FR	N/A	N/A	F	N/A	N/A	N/A	FR	N/A	N/A
Pine Creek/ Quinn Canyon	FR	25%	35%	FR	25%	35%	NF	15%	25%	10%	FR	25%	40%
Tom Plain	FR	25%	35%	FR	25%	35%	FR	25%	35%	20%	FR	25%	40%
Treasure Hill	FR	25%	35%	FR	25%	35%	FR	25%	35%	20%	FR	25%	40%
Troy Mountain	NF	15%	25%	FR	25%	35%	N/A				FR	25%	40%

2.2.1.2. Resource-Specific Design Features

Alternative 1 (Proposed Action) includes project design features for sage grouse, goshawk, sensitive plants, cultural resources, pygmy rabbits, **draft** allotment management plans (AMPs), and best management practices as detailed below.

2.2.1.2.1. Wildlife

Future planned activities that are likely to concentrate livestock use such as salting, placement of watering sources, and placement of temporary handling facilities, would avoid impacting wildlife by being located at least:

- 0.5 miles from a known sage-grouse nest or active lek (*USDA FS 2012* and Connelly et al. 2000).
- 100 feet from a pygmy rabbit burrow (Larrucea 2007 and USDI FWS 2004).
- 650 feet from a known active flammulated owl nest until young have fledged (Reynolds et al. 1992).
- 500 feet from a known active bat roost or hibernacula (Pierson et al. 1999).
- 0.25 mile from riparian and aspen vegetation communities (derived from Sierra Nevada Framework to protect goshawk nest sites (USDA FS 2004).

Where existing concentrating activities are located within these buffers, permittees should adjust their locations according to these guidelines, where possible.

Avoid opening any allotments within 4.0 miles of leks before June 30 (protects nesting/early brood-rearing) or within 0.5 miles before May 15 (protects breeding) (USDA FS 2012).

Within 1.25 miles of active leks or in movement corridors between leks and roost locations, all proposed fences would be mitigated with proper siting, marking, and post and pole construction; all existing fences would be marked; and all fences that are no longer needed would be removed (USDA FS 2012).

All water developments would be designed and fitted with escape ramps that meet Bat Conservation International standards (Taylor and Tuttle 2007).

2.2.1.2.2. Sensitive Plants

Future planned activities that are likely to concentrate livestock use, such as salting, placement of watering sources, and placement of temporary handling facilities, shall not occur any closer than 0.25 miles of known sensitive plant locations. Future livestock concentrating activities would not occur in potential habitat for sensitive plant species until surveys are performed. If sensitive plants are found, the population would be avoided. ***At this time there are no known locations of sensitive plants being affected by concentrating activities. If any sensitive plants are found where*** placement has already affected known sensitive plant locations, the activity would be evaluated for adverse effects and a determination made about whether mitigation is required to provide adequate protection. Surveys in potential habitat would also include existing activities that concentrate livestock use.

2.2.1.2.3. Cultural Resources

Future salt blocks, watering sources, or other range supplements likely to concentrate animals in small areas would be placed to avoid potentially eligible cultural resource sites. Where supplement placement has already affected cultural sites, movement should be considered if the site is considered potentially eligible for the National Register of Historic Places. The two-tiered strategy to address potential effects to historic properties from the rangeland memorandum of understanding (MOU) between the Forest Service and the Nevada State Historic Preservation Office (SHPO) would continue to be implemented. ***Eligible cultural resources adversely affected by existing range developments would be mitigated or avoided following the protocols listed in the MOU.*** See Cultural Resources section in chapter 3 for additional information on the strategy implemented under the MOU.

2.2.1.2.4. Allotment Management Plans

New allotment management plans (AMPs) would display the following management practices to address the need for rest or deferment as a restoration tool. The new AMPs would design and implement grazing systems that prevent an area from being grazed at the same time of year for 3 or more years in a row.

- Timing of livestock use (season of use, range readiness): Elevation, temperate zone, predominance by cool or warm season forage plants, and seasonal danger periods with poisonous plants are factors considered in establishing season of use. If resource conditions (forage growth, saturated soils, etc.) are consistently not ready for livestock use, entry dates may need to be adjusted. Lack of movement toward achieving desired conditions may determine the need to place emphasis on winter, spring, or fall use, rather than summer use.
- Intensity of use (forage utilization, browse use, streambank alteration): The main trigger for intensity of use is the point at which allowable use is reached. Reaching allowable use prompts the need to examine distribution tools (herding, salting, fencing, availability of water), timing of cattle movement either between units or off the allotment, class of livestock, and stocking rate.
- Duration of use (entry dates, move dates, and exit dates): If allowable use levels are consistently exceeded (3 years in a row), there is a need to examine each of these components to determine the need for change.
- Frequency of use (grazing system): Grazing systems should minimize adverse plant response to grazing intensity, frequency, and seasonality. If, over time, a grazing system (the length and timing of rest or deferment) is not restoring forage plant vigor and maintaining high vegetation condition, the grazing system may need to be modified.

Appendix G includes draft AMPs with this information for each allotment where grazing would be authorized under this alternative.

2.2.1.2.5. Best Management Practices

State of Nevada and Forest Service Intermountain Region best management practices (BMPs) would be used to meet the requirements of the Clean Water Act. The Forest Service Intermountain Region has also developed BMPs to address noxious weeds. A listing of BMPs that would guide this project can be found in appendix D.

The following sections provide a more detailed discussion of some of the key elements of Alternative 1 (Proposed Action) identified in the bulleted list above.

2.2.1.3. Proper Use Criteria

Under the Alternative 1 (Proposed Action), proper use criteria *have been* set for each allotment based on current rangeland ecological conditions. For this project, herbaceous and woody utilization and streambank alteration were chosen as the proper use criteria. The Intermountain Region Rangeland Ecosystem Analysis and Monitoring Handbook (FSH 2209.21, Ch. Zero Code) defines proper use criteria as the:

“limiting factor or factors which will be measured on a particular site to determine if the site has been properly used. It could be residual forage, impact on other resources or uses, or any other measurable factor on a particular site”.

Proper use criteria are guides for managing livestock movement and assessing resource use impacts at the end of growing season. The assessment of proper use criteria determines if grazing

use leaves resources in an appropriate condition for moving toward objectives. The proposed proper use criteria are designed to manage livestock grazing at levels that would move the resources towards the desired conditions. The proper use criteria are not desired conditions, they are measurable limits on grazing that would allow the landscape features to meet or move towards desired conditions.

Generally, proper use criteria cannot by themselves determine whether a particular grazing system is contributing to recovery, or conversely, contributing to degradation. This is especially true of a single year's values. Long-term monitoring is used to determine the ecological condition and trend of the rangeland resources. Additional information on long-term monitoring is discussed below.

2.2.1.3.1. Utilization at the End of the Growing Season

Utilization considers the physiological response of the plants being grazed and can be important to changes in soil, water, and vegetation resources when used appropriately (Smith et al. 2007). Although utilization could be exceeded on occasional years without a dramatic effect on ecological condition, routine and repeated excess utilization of herbaceous and woody species would have detrimental effects on ecological condition. Maximum utilization values to promote plant health and vigor would be set and measured as a percent by weight at the end of the growing season. As a result, ecological condition over the long term would be maintained or improve.

The amount of use is not the only factor related to livestock grazing that may affect the plant community. Other factors such as 1) when the area is being grazed and 2) how long the livestock are grazing an area are also critical to livestock management. Even given these other factors when assessing effects to plants for livestock grazing, use levels seem to be the most important factor (Clary and Webster 1989). Holechek and others (1998) found that differences in utilization levels showed more change in plant response and health than differences in grazing systems.

2.2.1.3.2. Streambank Alteration

Streambank alteration ***can occur*** when large herbivores walk along streambanks or across streams (***USDI BLM 2011***, Cowley 2002). The animals' weight can cause shearing that ***can result*** in a breakdown of the streambank and subsequent widening of ***some*** stream channel ***types***. It ***can*** also expose bare soil, increasing the risk of erosion of the streambank. Animals walking along the streambank may increase the amount of soil exposed to the erosive effects of water by breaking or cutting through the vegetation and exposing roots and/or soil (***USDI BLM 2011***). Excessive trampling causes soil compaction, resulting in decreased vegetative cover, less vigorous root systems, and more exposure of the soil surface to erosion (***USDI BLM 2011***).

Streambank alteration can be used as a within season trigger to move livestock; it can also be used as an end-of-season indicator of proper use (USDI BLM 2011).

Similar to stubble height, streambank alteration is an annual or short-term indicator of the effect of grazing impacts on long-term streambank stability. As such, it can be used as a tool to assess grazing intensity and to determine when such intensity may be excessive (USDI BLM 2011).

Recent studies are beginning to reflect the importance of streambank alteration as proper use criteria and have found that streambank alteration levels are more effective in initiating an upward change in condition than either forage utilization or stubble height (USDI BLM 2011)

Cowley (2002) summarizes various studies that describe levels of functioning streambanks and found that 70 percent unaltered streambanks (i.e., 30 percent altered streambanks) is the

minimum level that would maintain stable conditions. Pfankuch (1978) and Hayslip (1993) use 90 percent or more unaltered streambank as the lower level of excellent or optimal condition. *Cowley (2002) provides support for using 20 percent streambank alteration for streambanks in functioning condition. Cowley (2002) also acknowledges that 20 percent streambank alteration would provide for significant progress towards functioning condition. Finally, Cowley (2002) concluded that 10 percent or less streambank alteration would allow for near optimal streambank recovery.*

However, not all streambank channels are equally susceptible to disturbance (Rosgen 1996). Using the Rosgen (1996) system for categorizing stream channels, streambank alteration is only an appropriate tool for making livestock management decision on “E”, “F”, and “G” channel types and “C” channel types in valley bottoms. Streambank alteration is not an appropriate tool for making livestock management decisions on “A”, “B”, or “D” channel types, or “C” channel types where the main control is rock or large woody debris. One of the common themes between these four channel types is they are located in valley bottoms. Table 8 provides examples of the various channel types, including the vertical streambanks that are characteristic of “E”, “F”, “G”, and “C” channel types. These channel types are discussed in greater detail in the Watershed Specialist Report in the project record.

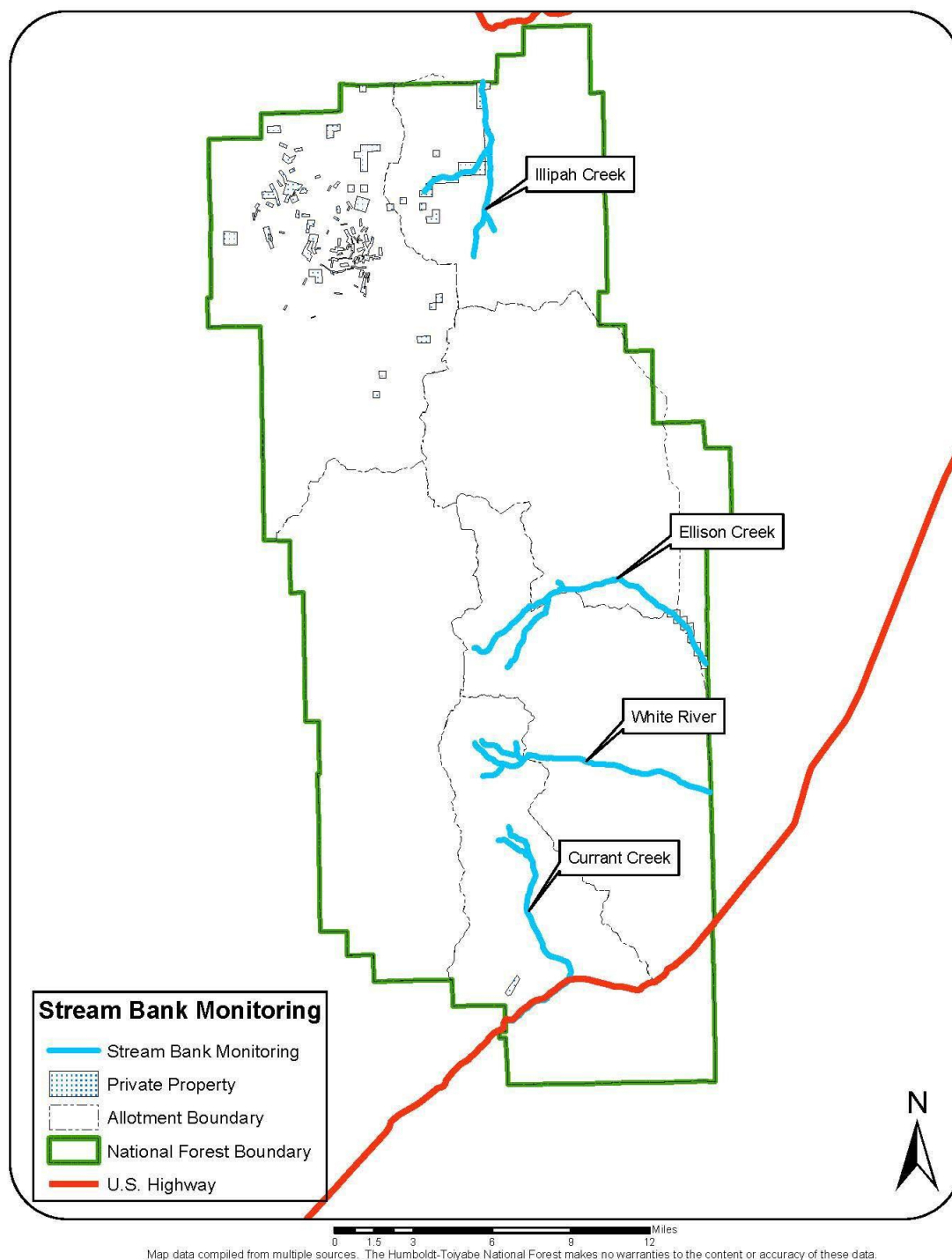
Table 3: Primary Delineative Criteria for the Major Stream Types

Stream TYPE	A	B	C	D	DA	E	F	G
Dominate Bed Material	1 Bedrock							
	2 Boulder							
	3 Cobble							
	4 Gravel							
	5 Sand							
	6 Silt-Clay							
Entrenchment	< 1.4	1.4 - 2.2	> 2.2	n/a	> 4.0	> 2.2	< 1.4	< 1.4
W/D Ratio	< 12	> 12	> 12	> 40	< 40	< 12	> 12	< 12
Sinuosity	1 - 1.2	> 1.2	> 1.2	n/a	variable	> 1.5	> 1.2	> 1.2
Slope	.04-.099	.02-.039	< .02	< .04	< .005	< .02	< .02	.02-.039

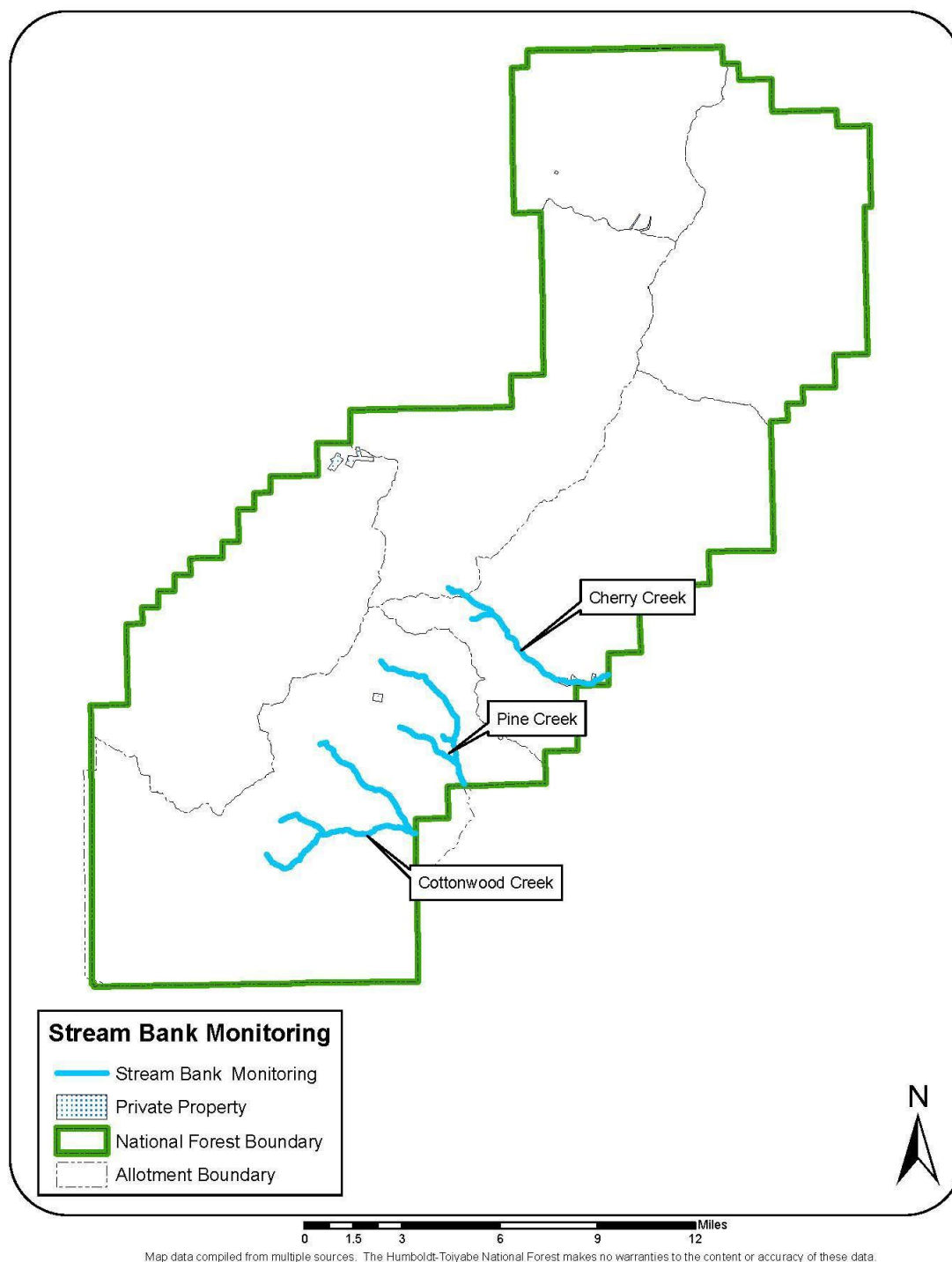
Source: Rosgen 1996.

Only a few streams in the project area have “E”, “F”, and “G” channel types or “C” channel types in valley bottoms. On the White Pine Range, these streams include Illipah Creek, Ellison Creek, White River, and Currant Creek. On the Grant-Quinn Range, these streams include Cherry Creek, Pine Creek, and Cottonwood Creek. See Maps 4 and 5. As noted above, only a portion of these streams would be categorized as an “E”, “F”, or “G” channel type or a “C” channel type in a valley bottoms. Alternative 1 (Proposed Action) would use streambank alteration as proper use criteria on these streams to indicate the need to move livestock from the area.

Map 2: Streambank Alteration Monitoring on White Pine Range



Map 3: Streambank Alteration Monitoring on Grant-Quinn Range



2.2.1.3.3. Within Season Triggers

To ensure that the end of growing season utilization levels are not exceeded, appropriate within season triggers would be applied to grazing systems and site specific conditions. Within season triggers are guides for livestock managers to move livestock. Within season triggers can include, among other things, duration, streambank alteration, and utilization. Within season triggers regarding utilization are often set higher than the end of growing season measurements because regrowth can occur in the grazed area after livestock have been removed.

Amendment 2 of the Forest Plan (appendix B) establishes the maximum within season utilization triggers for both upland and riparian vegetation communities. Amendment 2 also provides guidance for the appropriate application of within season utilization triggers. Following this guidance, within season utilization triggers would be set annually after consideration of the grazing system, current conditions in the allotment, and the end of growing season utilization levels.

In 2005, seeps and springs were categorized in accordance with Amendment 2 of the Forest Plan (USDA FS 1986). Maximum utilization limits, in the form of within season triggers, have been established for riparian areas, seeps and springs, uplands, riparian browse, and upland browse, and are taken from Amendment 2 of the Forest Plan as summarized in table 8.

2.2.1.3.4. Proper Use Criteria by Rangeland Condition

The proper use criteria for each rangeland condition are listed by habitat group in table 9. This table displays the maximum utilization and streambank alteration levels for various habitat groups in the project area. Proper use measurements would be based on end of growing season conditions for herbaceous vegetation. Woody vegetation and streambank alteration proper use measurements would be within season triggers based on the current year's growth and alteration. These proper use criteria were established based on the most current information available regarding the conditions and trends of resources within each allotment. These proper use criteria are based on an extensive review of scientific literature on grazing and its effect on vegetation under conditions similar to those in the Ely Westside Rangeland Project area.

As shown in table 9, utilization and streambank alteration is generally more restrictive if a habitat group is in functioning-at-risk or non-functioning condition than it would be if the community was in functioning condition. The proper use criteria have been adjusted to more appropriately reflect levels of use that would protect resources and ensure stable and upward trends in vegetation and stream conditions. The specific proper use criteria that would be used from table 9 would vary by allotment based on the habitat groups and condition in each allotment. Under this alternative, specific proper use criteria have been established for each allotment based on the current ecological condition of the habitat groups within each allotment (table 7).

Table 4: Proper Use Criteria under Alternative 1 – Proposed Action.

HABITAT GROUP				Maximum Allowable Utilization as a% by Weight	
Habitat		Grazing System	Riparian Value Area ²	Within Season Trigger	End of Season F/FR/NF ¹
Herbaceous Vegetation	Moist-Dry Meadow Wet Meadow Stream/ Riparian	Season Long	Class I-II	35	35 ⁵ /35/25
			Class III-IV	50	45/35/25 ³
			Class V	55	
		Deferred Rotation	Class I-II	45	
			Class III-IV	55	
			Class V	65	
		Rest Rotation	Class I-II	45	
			Class III-IV	60	
			Class V	65	
		High Intensity Short Duration	Class I-II	55	
			Class III-IV	65	
			Class V	70	
	Aspen/ Cottonwood	Season Long		55	45/35/25
		Deferred Rotation		60	
		Rest Rotation		65	
Non-Riparian	Season Long		55	50/40/30	
	Deferred Rotation		60		
	Rest Rotation		65		
Woody Vegetation	Non-Riparian			50	35/25/15
	Aspen (available saplings)			35	35/25/15
	Meadows (dry, moist, wet)			35	35/25/15
	Stream/Riparian (cottonwood, available saplings)			35	35/25/15
	Stream/Riparian (non-cottonwood)			35	35/25/15
Streambank Alteration ⁴	Stream			F/FR/NF ¹	N/A
				20/20/10	

¹ Functioning/Functioning-at-Risk/Non-Functioning ecological condition² Riparian value areas as defined in Forest Plan Amendment 2³ All riparian value areas regardless of classification⁴ As measured by Multiple Indicator Monitoring (MIM) protocol (USDI BLM 2011)⁵ 35 percent is the maximum utilization allowed by Forest Plan Amendment 2 for season long grazing on Class I or II riparian value areas

2.2.1.4. Monitoring

Monitoring has the dual purpose of ensuring compliance with the design features and proper use criteria for an allotment and determining whether the current management of the allotment is maintaining or moving the area toward functioning condition. Implementation and focused effectiveness monitoring are *necessary* to determine when or if management changes should be made and to guide the direction that those changes take. Under Alternative 1 (Proposed Action), monitoring would occur at varying levels on every allotment every year. The Forest Service would invite participation from rangeland users and other interested parties where feasible. The Forest would prepare an annual report regarding the previous year's range management activities,

including the results of any monitoring that occurred, both short-term and long-term, within each allotment.

2.2.1.4.1. Key Areas

Because the acreages these allotments cover is vast and soil and vegetation parameters cannot be monitored on every part of an allotment, the “key area concept” would be used for **short-term and long-term** monitoring efforts. A key area is a relatively small portion of rangeland that because of its location, grazing or browsing value, and/or use serves as a monitoring and evaluation site that is representative of conditions in the larger area. A key area guides the general management of the entire area of which it is a part, and would reflect the overall acceptability of current grazing management over the range. Key areas can be a short segment of stream or a small upland area. A key area can also be an entire stream reach or large upland basin.

The initial key area locations for short-term and long-term monitoring for each allotment are included in the draft AMPs in appendix G. The locations of key areas for monitoring may be changed or adjusted over time as conditions change or new information becomes available. The process for selecting key areas is described in appendix E.

2.2.1.4.2. Implementation Monitoring (Short-Term)

Short-term monitoring would be used to determine if the actions described under Alternative 1 (Proposed Action) are being implemented as planned and are meeting the proper use criteria and design criteria. It could also be used to conduct limited tracking on ecological condition and trend.

Overall monitoring of conditions on the Ely Ranger District, including the project area, occurs every year. This kind of monitoring is based on general observations of rangeland conditions by the Forest Service and reports from other visitors to the project area. This work is done in conjunction with rangeland management, as well as other resource management activities (i.e., fisheries, wildlife, archaeology, etc.). This information would be evaluated to determine if additional monitoring emphasis is desirable in a particular allotment.

Project specific short-term monitoring would involve the following actions:

- ***On an annual basis***, the Forest Service would conduct compliance monitoring (including within season trigger and proper use criteria observations) on ***every*** allotment ***where grazing is authorized that year***. Annual operating instructions (AOIs) and terms and conditions would be monitored for compliance.
- ***The proper use criteria would be monitored using established protocols***. End-of-season utilization would be monitored using the annual monitoring methodologies included in the Utilization Studies and Residual Measurements (Interagency Technical Reference, 1734-3, 1996). These are the methods referred to in the Nevada Rangeland Monitoring Handbook. Streambank alteration would be monitored using the multiple indicator monitoring (MIM) protocol (USDI BLM 2011).
- ***Proper use criteria monitoring for end-of-season utilization would be conducted in key areas. As discussed above, key areas are locations that are representative of conditions in the larger area. Monitoring locations would vary from year to year because livestock do not use the same place in the same way every year. Key areas would be moved (annually if necessary) if they are not located in an area representative of the conditions in the larger area. The process for selecting where to place a key area is described in appendix E.***
- The Forest Service would invite participation from permittees, other rangeland users, and interested parties in the short-term monitoring efforts.

- The responsibility for ensuring livestock moves occur on time remains with the permittee. **To ensure they meet this responsibility**, permittees would conduct monitoring of proper use criteria and compliance with the AOIs, which could include design features, improvement maintenance, and other standards, guidelines, and terms and conditions in the grazing permits, to ensure they meet this responsibility.
- Permittees, other rangeland users, and interested parties would be encouraged to share any short-term monitoring data they collect. Permit administrators would review this monitoring information to ensure compliance and prepare for the next grazing season. Monitoring information may include documentation of utilization measurements, photos, or other relevant documentation.
- The Forest Service would work with the permittee(s) throughout and immediately following the grazing season to determine the outcome for each allotment for that season.

2.2.1.4.3. Effectiveness Monitoring (Long-Term)

Long-term monitoring would be used to determine if the proper use criteria and grazing management guidelines included in this alternative and the AMPs are effective in moving resources towards functioning ecological conditions and **moving towards** an upward or stable trend in resource conditions. Long-term monitoring would gauge the success of allotment management by comparing evaluations on rangeland condition and trend against previous evaluations. Rangeland condition (functioning, functioning-at-risk, non-functioning) has been discussed in detail **in section 1.4.3**. Trend is characterized as “toward potential,” “away from potential,” or “static” (SRM 1989) or “direction of change over time” (FSH 2209.21). The appraisal of trend is simply the recognition of the nature, rate, and direction of ecological change (USDA FS 1951).

As noted above in **section 1.4.3 Summary of the Management Direction**, functioning ecological condition as defined by the Matrices is a general expression of desired conditions. Each matrix contains multiple attributes used to determine that general expression of the current ecological condition. While consideration of all of these attributes is appropriate when making a general determination of ecological condition, making project-level decisions or adjustments are not always warranted. This is because not all of the attributes used by the Matrices to assess ecological condition in a vegetation community are affected equally, or even at all, by project-level activities.

For this project, future ecological condition assessments would be based on the attributes that have a cause and effect relationship with adjustments in livestock management. Data on all attributes would be collected when monitoring is conducted so the general condition of the area can be determined. After the monitoring data has been collected, attributes that are not in functioning condition would be individually evaluated to determine if domestic livestock grazing is affecting them. This evaluation would be documented as part of the long-term monitoring report. If the evaluation does not identify a causal link between the authorized grazing activities and an attribute that is not in functioning condition, that attribute would not be considered in the project-level assessment of ecological condition or in a determination to adjust proper use criteria. Examples of situations where an attribute would not be used include conifer encroachment into aspen stands, pinyon-juniper encroachment into uplands, and water quality attributes affected by other activities.

Current conditions and trends have been identified in the project area by using a variety of data and monitoring techniques which include ecodata plots, nested frequency studies, and general aquatic wildlife surveys (GAWS). Scorecards, including the Matrices (appendix A), the Central Nevada Riparian Guide (USDA FS 1996), and the Sagebrush-Grass Community Guide (USDA FS 1987), were used to evaluate the data and guide in the identification of current ecological

condition. ***The Vegetation (and Range) Specialist Report (located in the Range folder in the Resources section of the project record) contains the detailed data, methodologies, analyses, conclusions, maps, references, and technical documentation relied upon to reach the conclusions in this EIS. The original vegetation studies can also be found in the project record.***

Long-term monitoring sites would be verified or re-established by an interdisciplinary team and reviewed by the Forest ecologist and other resource specialists. Sites are representative of the dominant soil and vegetation types on the allotments. The locations of the long-term monitoring sites for each allotment would be included in the AMPs. ***The draft AMPs included in appendix G identify the initial long-term monitoring locations that will be used for the allotments.*** Long-term monitoring locations may be added or modified over time to adjust to new and/or updated information (FSH 2209.21, 42).

The long-term monitoring sites would be re-evaluated approximately every 5 years to determine rangeland condition, using the appropriate scorecards discussed above. This time frame was chosen because measurable changes in conditions occur slowly in the project area. More frequent monitoring is unlikely to result in any information that documents that the conditions have changed. Approved monitoring methods are listed in FSH 2209.21, chapter 40 and include photograph points, nested frequency, point ground cover samples, line intercept, plant density, and riparian protocols described in USDI BLM (2011) and Winward (2000). To determine actual trend, the long-term monitoring sites would be reevaluated using the appropriate parameter (composition, cover, etc.) and methodology (nested frequency, MIM, photo points, etc.).

Detailed monitoring protocols describing methods, time frames, locations, and a key to identify the vegetation groups have been included in the project record. These protocols would guide monitoring activities. The condition and trend information, along with other data would be used to evaluate any needs for change in management, including adjustments to the proper use criteria or season of use.

Allotment specific information and locations would be included within the individual AMPs. ***Appendix G includes draft AMPs with this information for each allotment.***

Although not required by Alternative 1 (Proposed Action), wildlife monitoring would continue, focusing on habitats for sensitive and management indicator species (MIS). Population monitoring would generally be conducted in cooperation with Nevada Division of Wildlife (NDOW). The Forest Service would continue to cooperate with NDOW to complete GAWS stream surveys on various streams within the project area.

Permittees would be encouraged, but not required, to participate in long-term monitoring and to collect data on their allotment(s). Data collection could be done in cooperation with the Forest Service or entirely on their own. Any data collected by the permittees would be collected using Forest Service approved methodologies or protocols. The Forest Service would fully review all data collected by the permittees to determine the quality and reliability of the data. All data collected would be stored in the allotment monitoring files at the Ely Ranger District.

While long-term monitoring using the Matrices and other appropriate protocols to measure trend would generally occur on a 5-year cycle, individual attributes contained within the Matrices may be monitored more frequently at select locations to more closely track trends. Other long-term monitoring methods, such as photo points, would be done annually at select locations throughout the allotments. If the methods for evaluating condition or trend have changed by the time of the monitoring, adjustments would be made to ensure that data can be “cross-walked” between the different methodologies so actual long-term trend can be determined.

2.2.1.4.4. Management Adjustments Based on Monitoring

Based on the successes or failures observed through short-term and long-term monitoring, adjustments to grazing strategies would be made. As discussed above, short-term monitoring would occur annually and long-term monitoring would generally occur on a 5-year cycle. Allotment specific monitoring sites and schedules would be included within the AMPs.

The information obtained through this monitoring effort would be evaluated to determine if management of an allotment should be adjusted. The flowchart included below in Figure 1 displays how monitoring results would be used to determine whether adjustments to grazing management are warranted and what kind of adjustments would be made. If adjustments are necessary, they would be included in the next year's AOIs.

As the flowchart in Figure 1 indicates, monitoring results could lead to several different kinds of adjustments to livestock grazing or management. In some circumstances, prescribed adjustments would be made to the proper use criteria if ecological conditions decline or improve. See tables 10 and 11. Other situations would call for administrative adjustments, including any of the various livestock management tools discussed in greater detail in appendix F, a temporary reduction on within season triggers and proper use criteria, or a temporary reduction in the number of livestock on the allotment. New grazing improvements, such as fencing or water developments, would require additional environmental analysis. Finally, if the permittee is not in compliance with the terms of their permit, administrative action on the permit may be warranted. Only the prescribed adjustments to the proper use criteria are part of the Proposed Action. The administrative actions are included in this discussion to provide a complete picture on how the monitoring results would be applied.

Figure 1: Livestock Management Flowchart

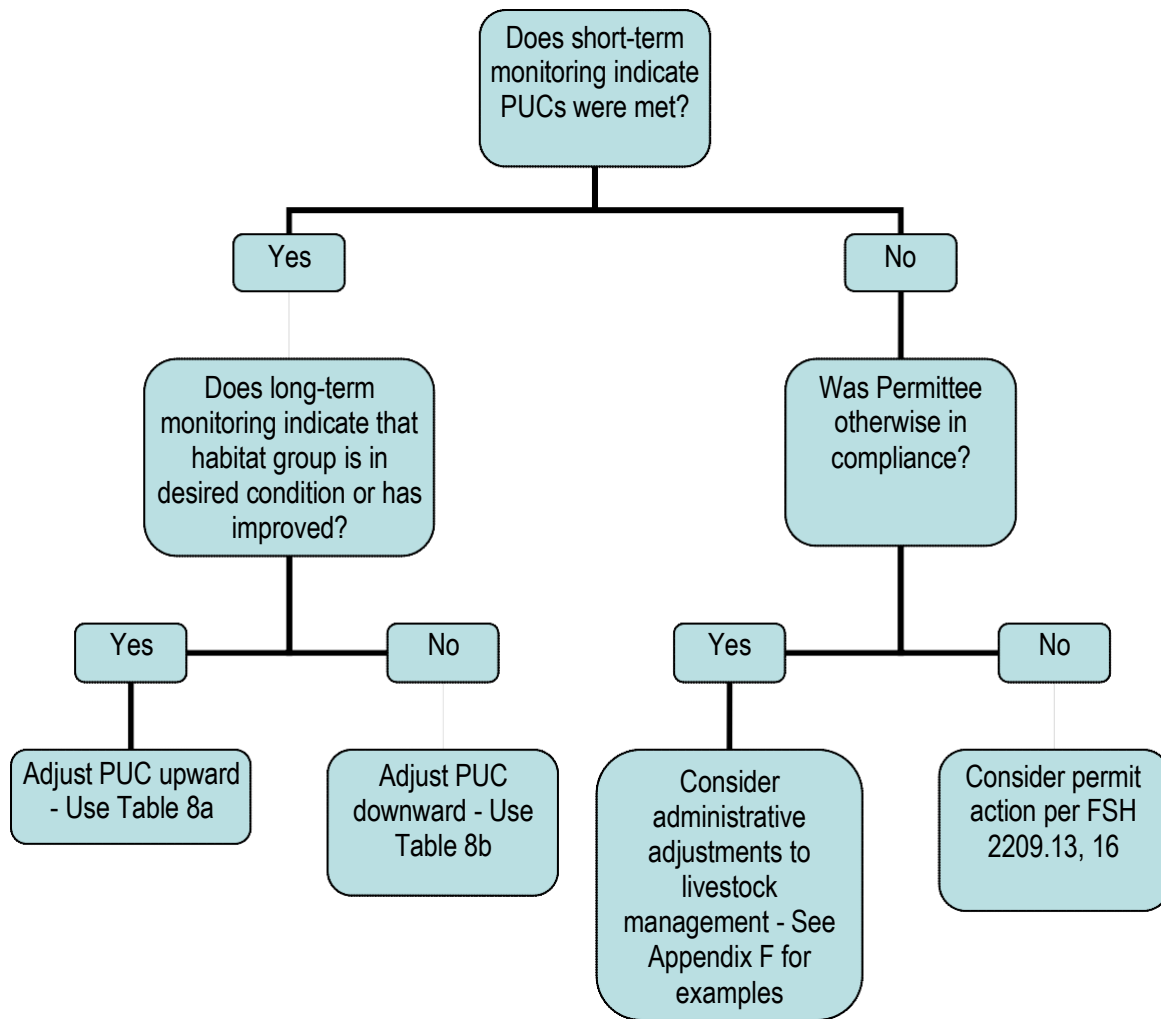


Table 5. Adaptive Management When Long-Term Monitoring Indicates Stable or Improving in Ecological Condition.

	DC Mgmt Objective	Existing Condition and Trend	End of Season Indicator	Threshold of Concern	Adaptive Management if Threshold of Concern is Reached	Monitoring
Herbaceous Vegetation	Functioning ecological condition	Functioning	45% utilization ¹	Long-term monitoring indicates static or upward trend	Continue allowing up to 45% utilization ¹	Utilization measured at end of growing season
		Functioning-at-risk	35% utilization	Long-term monitoring indicates functioning condition	Allow up to 45% utilization ¹	
		Non-functioning	25% utilization	Long-term monitoring indicates functioning-at-risk condition	Allow up to 35% utilization	
Woody Vegetation	Functioning ecological condition	Functioning	35% utilization	Long-term monitoring indicates static or upward trend	Continue allowing up to 35% utilization	Browse use measured at end of grazing season
		Functioning-at-risk	25% utilization	Long-term monitoring indicates functioning condition	Allow up to 35% utilization	
		Non-functioning	15% utilization	Long-term monitoring indicates functioning-at-risk condition	Allow up to 25% utilization	
Streambank Alteration	Functioning ecological condition	Functioning	20% alteration	Long-term monitoring indicates static or upward trend	Continue allowing up to 20% alteration	Alteration measured at end of time in unit
		Functioning-at-risk	20% alteration	Long-term monitoring indicates functioning condition	Allow up to 20% alteration	
		Non-functioning	10% alteration	Long-term monitoring indicates functioning-at-risk condition	Allow up to 20% alteration	

¹ Maximum utilization for Class I and II Riparian Value Areas under a season-long grazing system is 35 percent (FP Amendment 2, p. 5, 1990)

Table 6. Adaptive Management When Long-Term Monitoring Indicates Decline in Ecological Condition.

	DC Mgmt Objective	Existing Condition and Trend	Existing End of Season Indicator	Threshold of Concern	Adaptive Management if Threshold of Concern is Reached	Monitoring
Herbaceous Vegetation	Functioning ecological condition	Functioning	45% utilization	Long-term monitoring indicates functioning-at-risk condition	Reduce to 35% utilization	Utilization measured at end of growing season
		Functioning-at-risk	35% utilization	Long-term monitoring indicates non-functioning condition	Reduce to 25% utilization	
		Non-functioning	25% utilization		Remain at 25% utilization, consider additional actions	
Woody Vegetation	Functioning ecological condition	Functioning	35% utilization	Long-term monitoring indicates functioning-at-risk condition	Reduce to 25% utilization	Browse use measured at end of grazing season
		Functioning-at-risk	25% utilization	Long-term monitoring indicates non-functioning condition	Reduce to 15% utilization	
		Non-functioning	15% utilization		Remain at 15% utilization, consider additional actions	
Streambank Alteration	Functioning ecological condition	Functioning	20% alteration	Long-term monitoring indicates functioning-at-risk condition	20% alteration	Alteration measured at end of time in unit
		Functioning-at-risk	20% alteration	Long-term monitoring indicates non-functioning condition	10% alteration	
		Non-functioning	10% alteration		10% alteration, consider additional actions	

The process begins with consideration of the results from short-term monitoring. If short-term monitoring indicates the proper use criteria (PUC) are being met, the next step is to consider the results of long-term monitoring. Depending on how ecological conditions have changed, adjustments to the PUC levels would be made. If long-term monitoring reflected ecological conditions were stable or had improved in the allotment, table 10 would be used to determine the appropriate upward adjustment to the PUC levels. However, if the long-term monitoring demonstrates that ecological conditions in the allotment have declined, table 11 would be used to make the appropriate reduction to the PUC levels.

If the short-term monitoring indicates the applicable PUC levels were not met that year, the next step is to consider whether the permittee was otherwise in compliance with the terms and conditions of the permitted livestock grazing. If the permittee was otherwise in compliance, this suggests that administrative adjustments should be considered for the allotment. Permittee compliance would be measured by considering (among other things) whether range developments associated with the allotment were in good repair and operating properly and whether livestock moves were made on time. Examples of the kinds of administrative adjustments that would be considered are included in appendix F. These tools include adjusting season of use, time of use, herding, and supplement placement. Implementation of some restoration strategies and/or activities may require additional NEPA analysis and decisions. On the other hand, if the permittee is not otherwise in compliance with the terms and conditions of the permitted livestock grazing, then permit action authorized under FSH 2209.13 would be considered at that time.

In some instances, if short-term monitoring reveals specific vegetation conditions have changed as a result of grazing strategies, the allotment would be assessed to determine the current ecological condition. If the ecological condition has changed, the management adjustment process based on long-term monitoring would be applied. Management adjustments based on long-term monitoring are described below.

If short-term monitoring efforts identify a habitat group not included in tables 10 or 11, it would still be managed consistent with this alternative. The best available information would be used to determine the ecological condition of the habitat group and the appropriate proper use criteria from tables 10 or 11 would be applied. For example, if cottonwood were identified (discovered, etc.) in an allotment, its condition would be determined and the appropriate proper use criteria from tables 10 or 11 would be used to manage grazing activities in that habitat group.

2.2.1.5. Range Developments

Results of the allotment condition inventories and both implementation and effectiveness monitoring may identify a need to alter the location or construct new range developments, such as fences or water developments. This final environmental impact statement (FEIS) does not identify the need for new range developments nor does it consider the potential environmental effects of additional range developments. The need for these facilities would be determined on a case-by-case basis and used to facilitate the implementation of the management strategies and proper use criteria listed in *tables 10 and 11*. As new improvements are considered, all applicable laws and regulations would be followed (i.e., future NEPA analysis at the appropriate level).

2.2.1.6. Allotment Management Plans

New AMPs would be developed for each allotment for the next grazing season after issuance of the record of decision and would include the proper use criteria, key areas, and monitoring schedules. These AMPs would implement Alternative 1 (Proposed Action) and all of its requirements. Draft versions of the new AMPs are included in appendix G. The new AMPs would be finalized through a cooperative effort between the Forest Service and the affected permittees. Additional environmental analysis would not be necessary for the development and finalization of

the new AMPs because they implement the decisions that would be issued based on, and consistent with, this analysis. The AMPs and AOIs would be the tools to guide the-day to-day operations and on-the-ground implementation of the record of decision for this environmental impact statement (EIS).

2.2.1.7. Communication and Cooperation

To ensure appropriate communication, cooperation, and collaboration associated with management of grazing allotments in the project area occurs, the following actions would be taken to improve management associated with this alternative:

- Occasional field reviews with permittees and interested individuals and organizations may be scheduled, as needed, to evaluate on-the-ground conditions and resources.
- A report summarizing management actions, monitoring, and allotment administration would be completed annually and distributed and/or made available on the Forest's website to livestock permittees, state and federal agencies, county and tribal governments, other cooperators, and interested individuals.

2.2.2. Alternative 2: Current Management

Under the Alternative 2 (Current Management), livestock grazing would continue as it is currently permitted on the Blackrock, Cherry Creek, Currant Creek, Ellison Basin, Illipah, Pine Creek/Quinn Canyon, Tom Plain, and Treasure Hill allotments (Map 6). The management systems, numbers of animals, and season of use would remain the same under this alternative (table 6). The Big Creek, Hooper Canyon, and Irwin Canyon allotments would remain vacant and the Troy Mountain Allotment would remain closed (Map 6). No new temporary grazing permit would be authorized on the Troy Mountain Allotment. The three vacant allotments would continue to be used in emergency situations (drought years, fire relief, etc.) and would be available for new term grazing permits after additional site-specific NEPA analysis. The existing standards and guidelines in Amendment 2 of the Forest Plan, as well as current AMPs, would continue to guide the management within the project area. Additional information on current management parameters is included in appendix C.

Attachment 2

Non-Significant Forest Plan Amendment
to
Open the Troy Mountain Cattle and Horse Allotment

Amendment Number 11
Troy Mountain Grazing Allotment

Humboldt National Forest
Land and Resource Management Plan

The Humboldt National Forest Land and Resource Management Plan (Forest Plan) was approved on August 19, 1986. Changes affecting the Humboldt National Forest since that time have required periodic amendments to the Forest Plan to keep it current. Amendment Number 1 incorporated the changes resulting from the Nevada Wilderness Protection Act of 1989, which created several wildernesses on the Humboldt National Forest. Amendment Number 1 also provided updated or new management area direction that reflected the addition of these new wildernesses. The Grant Range Recommended Wilderness Management Area was replaced with the Grant Range Wilderness Management Area. This amendment to the Forest Plan removes the management area direction to continue the closure of the Troy Mountain Cattle and Horse allotment to domestic livestock use from the Grant Range Wilderness Management Area management direction. This amendment also re-opens this allotment to domestic livestock use.

Page 27, replace the eighth paragraph under Description with the following paragraph:

Livestock grazing occurs on an extremely limited basis within this management area due to the lack of water and forage and because of steep, inaccessible areas. The management area lies within three summer cattle allotments and one winter sheep allotment. The area provides very few (less than 200 AUMs) animal unit months for grazing. The Quinn Canyon Wild Horse Territory includes the bench on the west side of this area; however, no horses have ever been sighted within the Grant Range Wilderness.

Page 29, remove the following entry from the Management Direction for Range:

Continue the closure of the Troy Mountain C&H allotment to domestic livestock use.

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